

NYC Board of Education Retirement System Investment Meeting (Public)

Schedule	Wednesday, September 20, 2023 9:30 AM — 1:30 PM EDT
Venue	In-Person + Virtual (Location: NYC Comptroller's Office, 1 Centre Street, 10th Floor, Rm. 1005 Northside) "Southside Entry for Visitors"
Organizer	Kim Boston

Agenda

	PUBLIC AGENDA -	1
9:30 AM	Welcome and Opening	2
9:45 AM	Quarterly Presentation (Public): -Market Overview -Performance Update - Risk Update (if any questions)	3
	 BERS 2Q2023 Quarterly Presentation (Public).pdf	4
10:15 AM	Invitation to Join Labor Rights Investor Network:	49
	 About the Labour Rights Investor Network.pdf	50
	 Investor Statement on the Rights to Freedom of Association and Collective Bargaining.pdf	54
10:20 AM	Update on BAM University:	56
	NON-INVESTMENT MATERIAL - QUARTERLY PERFORMANCE REPORTING SECTION (Public Reports):	57
	State Street Quarterly Fund Performance Overview (Public):	58
	 BERS 2Q23 Quarterly Report Overview_(Public).pdf	59

ETI Quarterly Report (Public):	119
 ETI 2Q Qtrly Rpt (Public)_09.20.2023 (BERS).pdf	120
<hr/>	
Private Equity Quarterly Report (Public):	126
 PE 1Q Qtrly Rpt (Public)_09.20.2023 (BERS).pdf	127
<hr/>	
Real Estate Quarterly Report (Public):	151
 RE 1Q Qtrly Rpt (Public)_09.20.2023 (BERS).pdf	152
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Infrastructure Quarterly Report (Public):	179
 Infra 1Q Qtrly Rpt (Public)_09.20.2023 (BERS).pdf	180
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Risk Quarterly Report (Public):	210
 Risk 2Q Qtrly Report (Public)_09.20.2023 (BERS).pdf	211
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APPENDICES:	236
-Basket Clause	
-Liquidity Analysis	
 Basket Clause Rpt_09.20.2023 (BERS).pdf	237
 Liquidity Report_09.20.2023 (BERS).pdf	238
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PUBLIC AGENDA -

Welcome and Opening

Quarterly Presentation (Public):

- Market Overview
- Performance Update
- Risk Update (if any questions)



BERS INVESTMENT MEETING

PUBLIC SESSION



September 20, 2023

US AND GLOBAL INFLATION

Fed chair warns US inflation battle not over and hints at further rate rises

Source: The Guardian

Europe's Economy Expanded in Spring, and Inflation Has Eased

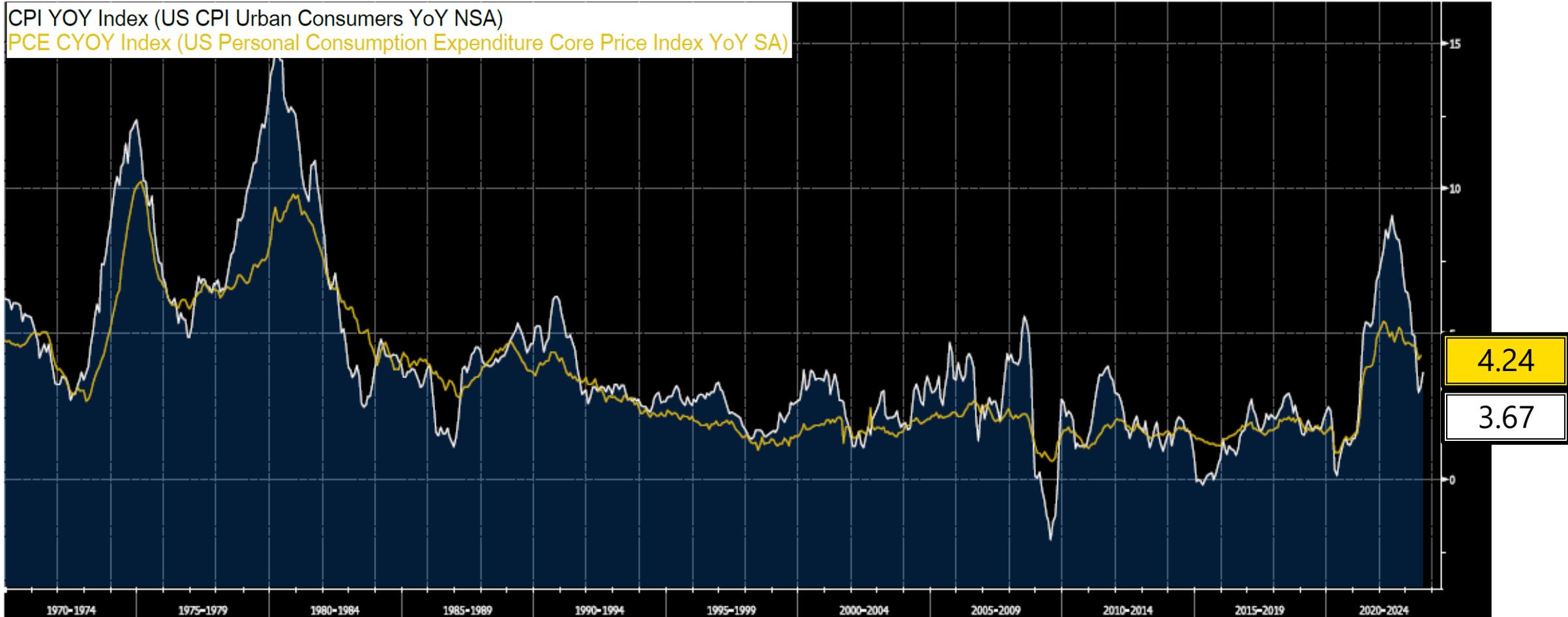
Source: New York Times

Deflation: Why falling prices in China raise concerns

Source: BBC



INFLATION



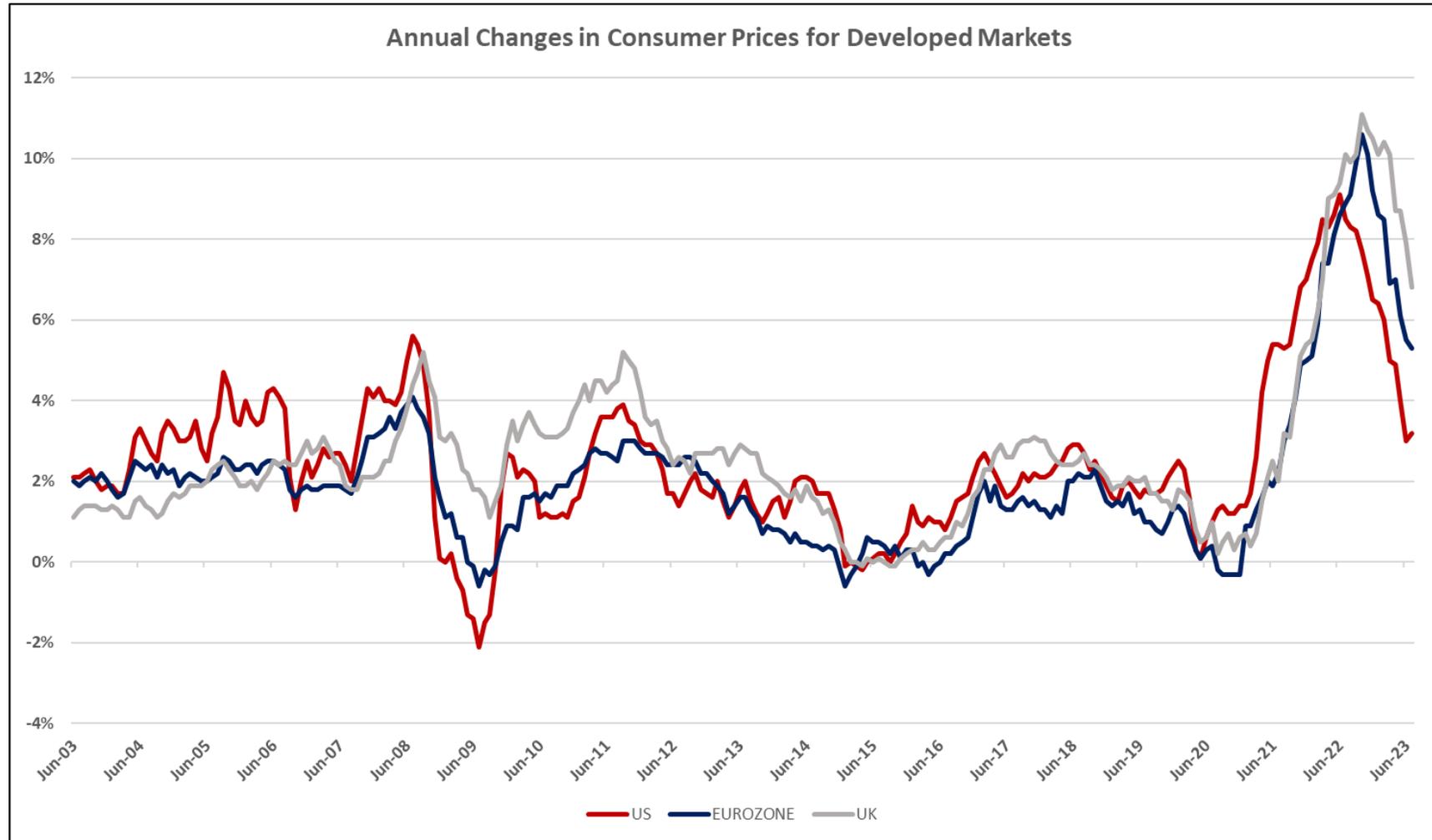
INFLATION NOT FALLING IN ALL SECTORS

Supercore inflation not moving down to the Fed's 2% inflation target



INFLATION AROUND THE WORLD

Eurozone and UK following trends in U.S.



US EMPLOYMENT

The US job market continues its cooldown, adding just 187,000 positions last month

Source: CNN

US jobs growth slowed more than forecast in July

Economy added 187,000 jobs and unemployment rate slipped to 3.5%

Source: Financial Times

Pace of U.S. Hiring Slows but Remains Solid

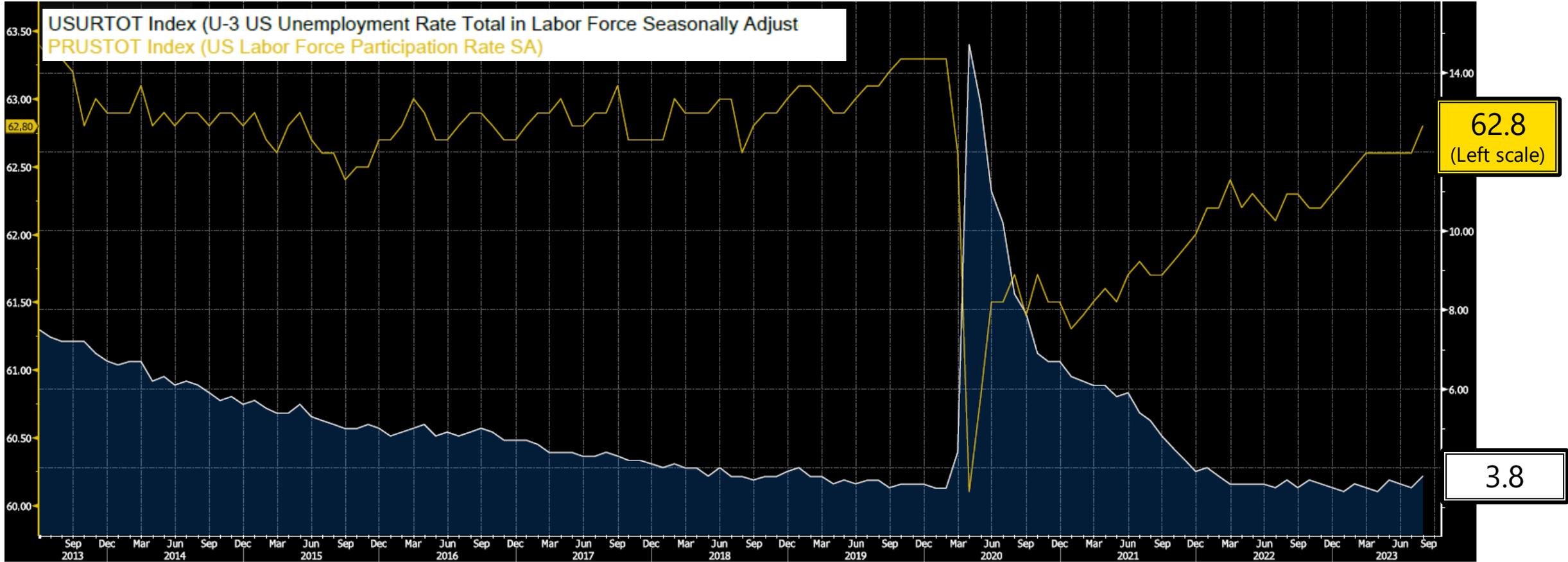
The labor market moderated in July, reflecting a cooling economy. But wages grew slightly more than expected, and are running faster than policymakers would like as they fight inflation.

Source: New York Times



UNEMPLOYMENT

Unemployment and labor participation each ticked up in August.



US AND NON-US ECONOMIC GROWTH

Wall Street is hiking forecasts for economic growth

Source: Axios

Europe's economy is growing again as inflation continues to fall

Source: CNN

China's economy misses growth forecasts, raising the odds of more support for its tepid recovery

Source: AP

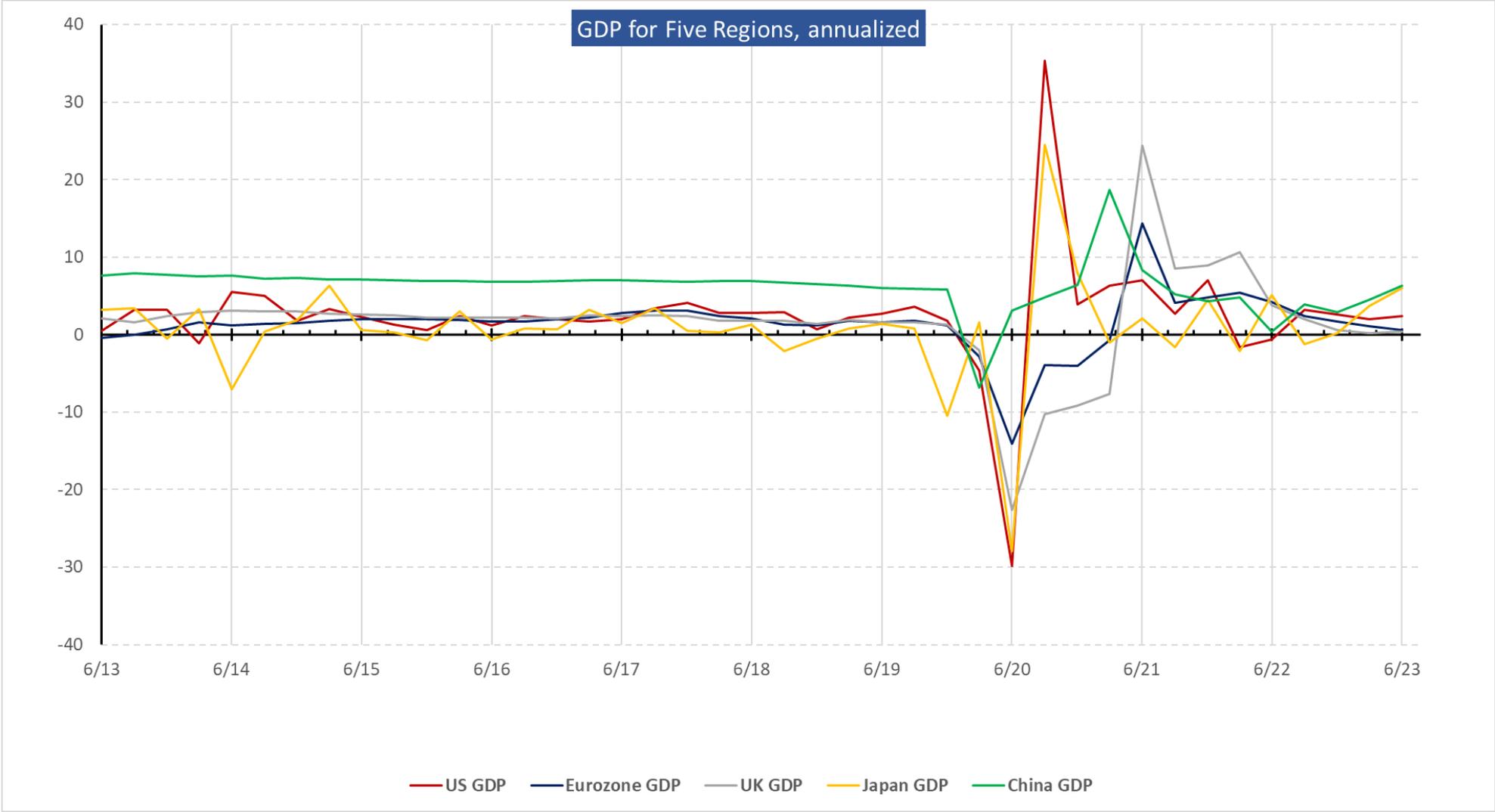
U.S. Economic Growth Accelerates, Defying Slowdown Expectations

Economy grew 2.4% last quarter, suggesting the U.S. is steering clear of recession

Source: WSJ



ECONOMIC GROWTH



US AND GLOBAL INTEREST RATES

Powell says Fed could raise interest rates further if economy, job market don't cool

Source: USA Today

Powell warns strong economy could lead to new interest rate hikes

Source: Bloomberg

Christine Lagarde vows to keep EU interest rates high 'as long as necessary' to slay the beast of inflation

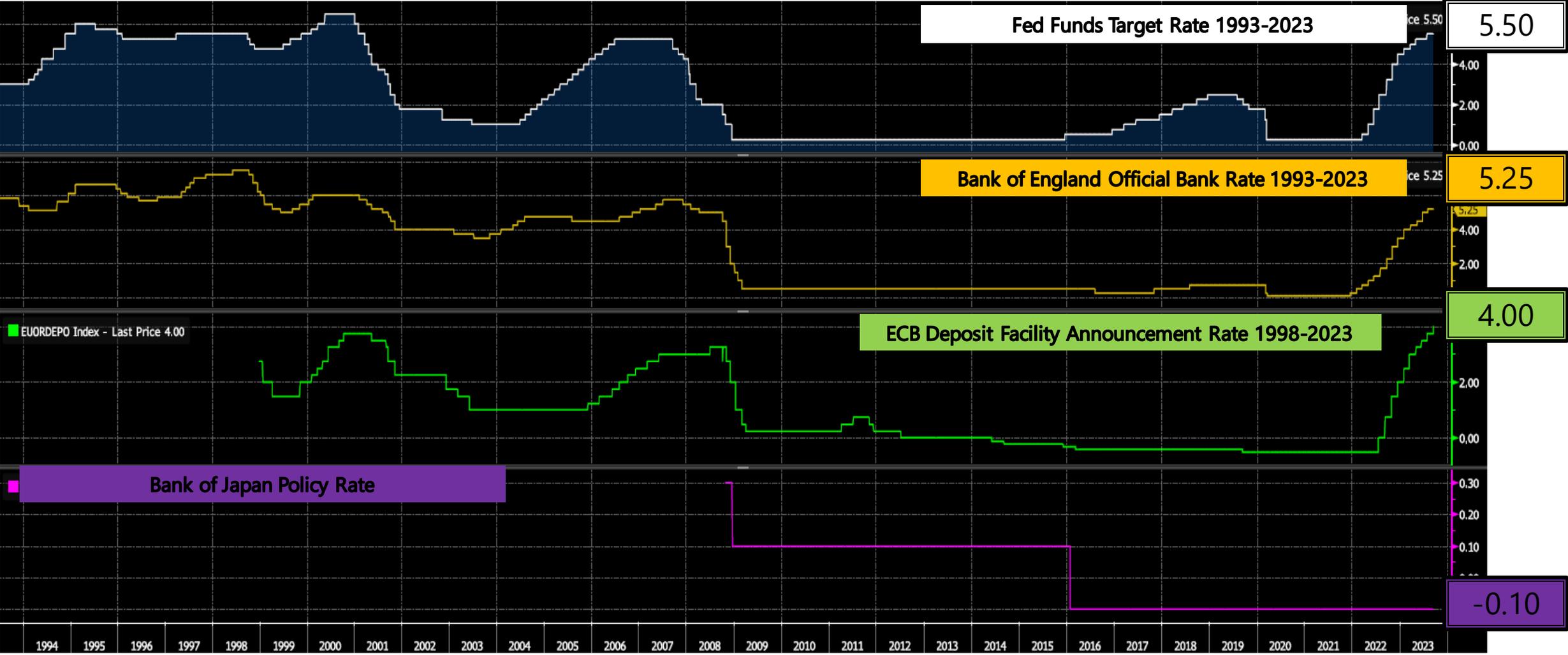
Source: Fortune

China cuts key interest rate as recovery falters

Source: BBC



GLOBAL RATE TARGETS



US CREDIT SPREADS AND US TREASURY YIELDS

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters

Treasury yields end Friday mixed after Powell signals more rate hikes ahead

Source: CNBC

Treasury Yields Hit Highest Since 2007 on Elevated Rate Fears

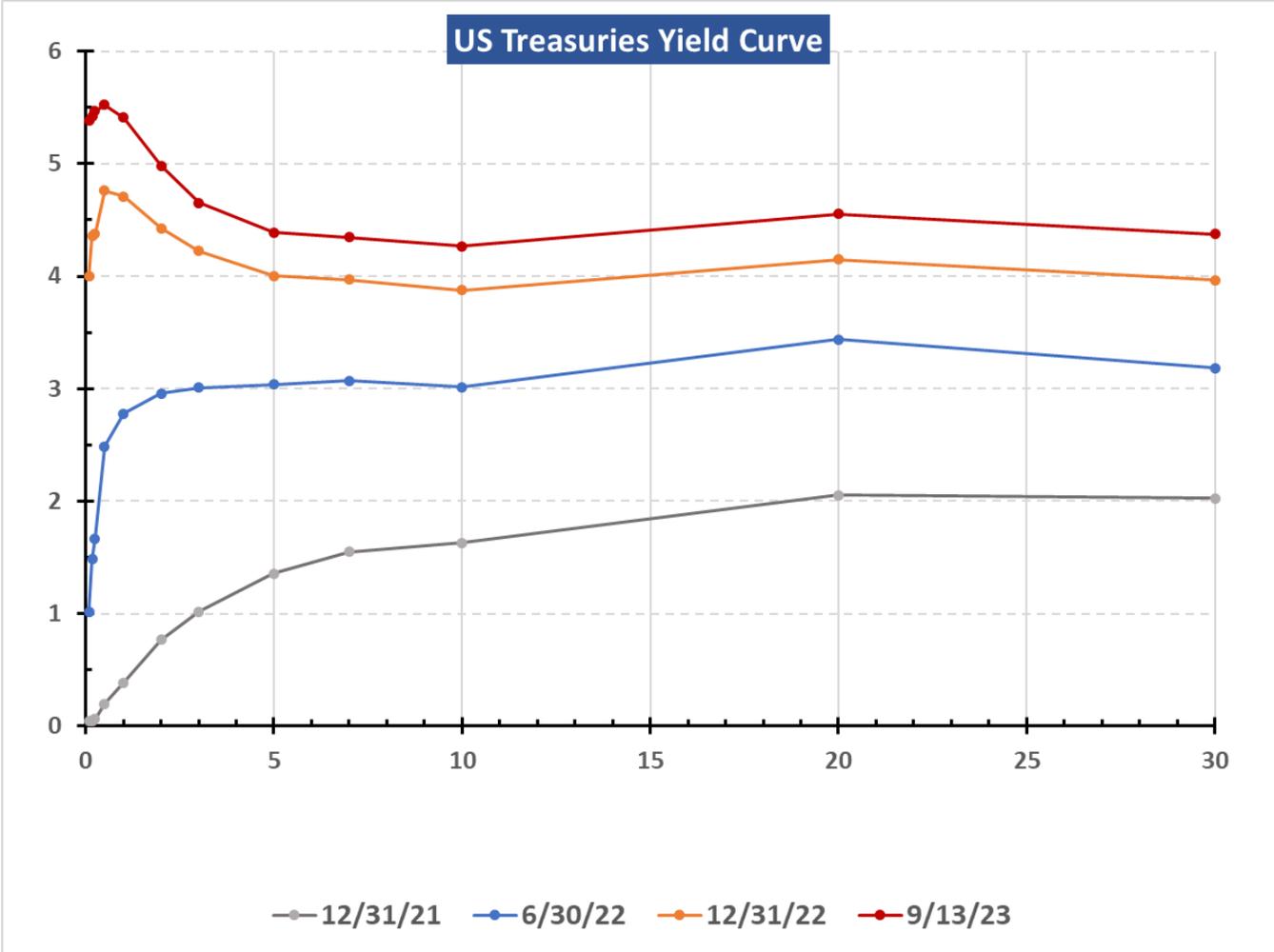
- Rising real yields reflect firmer economy and higher deficits
- 10-year yield hits 4.35%, highest level since financial crisis

Source: Bloomberg



U.S. TREASURY YIELDS AND SPREADS

The US Treasury yield curve has gone from normal to inverted over the last 18 months.



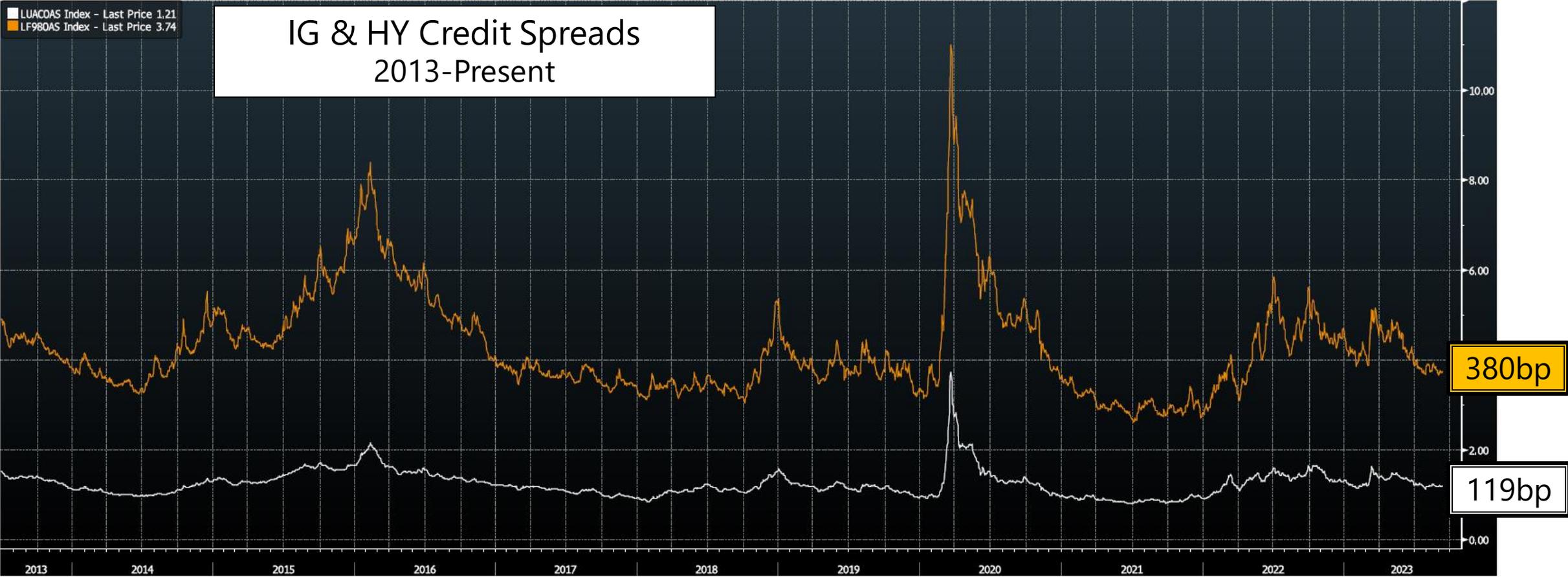
U.S. TREASURY YIELD HISTORY



10 Years Ended September 14, 2023



CREDIT SPREADS



10 Years Ended September 14, 2023



US STOCK AND BOND MARKET RETURNS

It's Been a Good Stretch for the Markets, but Not as Good as It Looks

While stocks, bonds and money market funds have generated positive returns for the year, a quirk in the calendar is creating deceptively strong performances.

Source: New York Times

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters

The stock market has soared this year, but will it last? Experts weigh in

The Nasdaq has climbed roughly 36% this year, while the S&P 500 has jumped 18%.

Source: ABC



BENCHMARK RETURNS, Q2-2023

Asset Class	Index	Q2-23	1 Year	3Year	5 Year	Expected*
Equities - U.S.	Russell 3000	8.39%	18.95%	13.89%	11.39%	5.80%
Equities - Developed Intl	MSCI World ex USA IMI Net	2.67%	16.35%	8.87%	4.17%	6.80%
Equities - Emerging Intl	MSCI EMERGING MARKETS	0.90%	1.75%	2.32%	0.93%	8.30%
Debt - US Govt Long Duration	FTSE Treasury 10+	-2.30%	-7.50%	-12.10%	-0.89%	2.65%
Debt - US Government	NYC Treas/Agency +5	-1.94%	-4.60%	-8.19%	0.00%	2.60%
Debt - Investment Grade	Bloomberg U.S. Corporate IG	-0.29%	1.55%	-3.43%	1.62%	3.60%
Debt - High Yield	Bloomberg U.S. HY -2% Issuer Cap	1.75%	9.07%	3.12%	3.34%	4.80%

*Average of consultant long-term arithmetic expected market returns as of 1H '20



WORLD EQUITY MARKETS

World Equity Indices						
Index	%Ytd	%YtdCur	P/E	Est FY1	Est FY2	DvYld
Americas						
DOW JONES	+4.41%	+4.41%	21.27	18.76	16.00	2.08
S&P 500	+15.37%	+15.37%	22.07	20.00	17.93	1.57
NASDAQ	+30.99%	+30.99%	48.51	28.89	23.19	0.80
S&P/TSX Comp	+3.16%	+2.93%	15.15	14.19	12.82	3.37
S&P/BMV IPC	+10.66%	+28.94%	13.86	12.64	11.03	3.63
IBOVESPA	+5.96%	+14.39%	7.92	8.43	7.78	5.29
EMEA						
Euro Stoxx 50	+13.12%	+14.18%	13.75	11.93	11.31	3.51
FTSE 100	-1.52%	+2.57%	11.25	10.55	10.03	4.17
CAC 40	+13.16%	+14.22%	13.84	12.34	11.75	3.21
DAX	+13.32%	+14.39%	16.00	11.36	10.39	3.70
IBEX 35	+15.45%	+16.54%	11.54	10.44	10.23	4.03
FTSE MIB	+20.45%	+21.58%	8.71	7.88	7.83	4.48
OMX STKH30	+6.39%	+0.89%	15.99	13.92	13.56	3.39
SWISS MKT	+2.91%	+7.56%	20.50	16.86	15.30	3.11
Asia/Pacific						
NIKKEI	+23.28%	+10.26%	17.90	18.36	16.84	1.90
HANG SENG	-8.34%	-8.86%	6.14	9.11	8.30	3.89
CSI 300	-3.07%	-8.31%	13.87	12.13	10.42	2.59
S&P/ASX 200	+1.72%	-4.12%	17.13	15.40	14.70	4.58



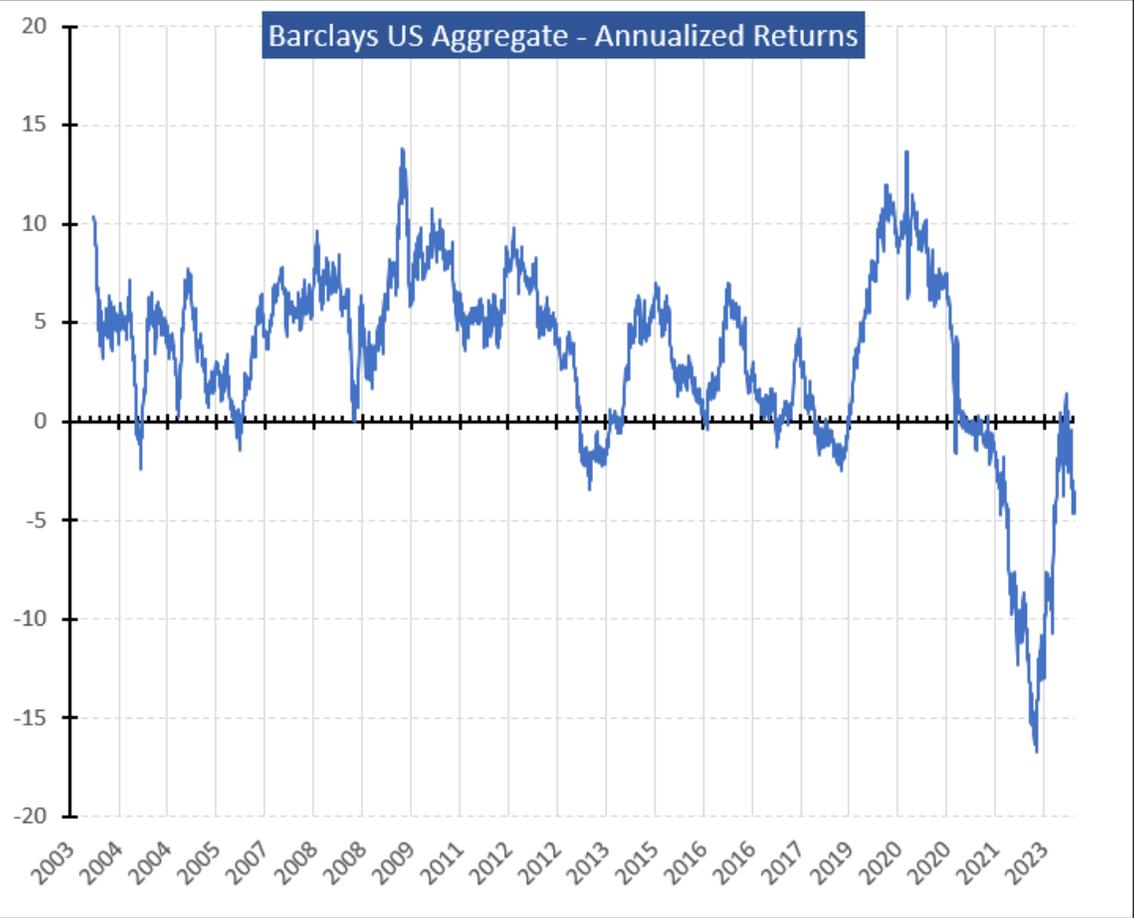
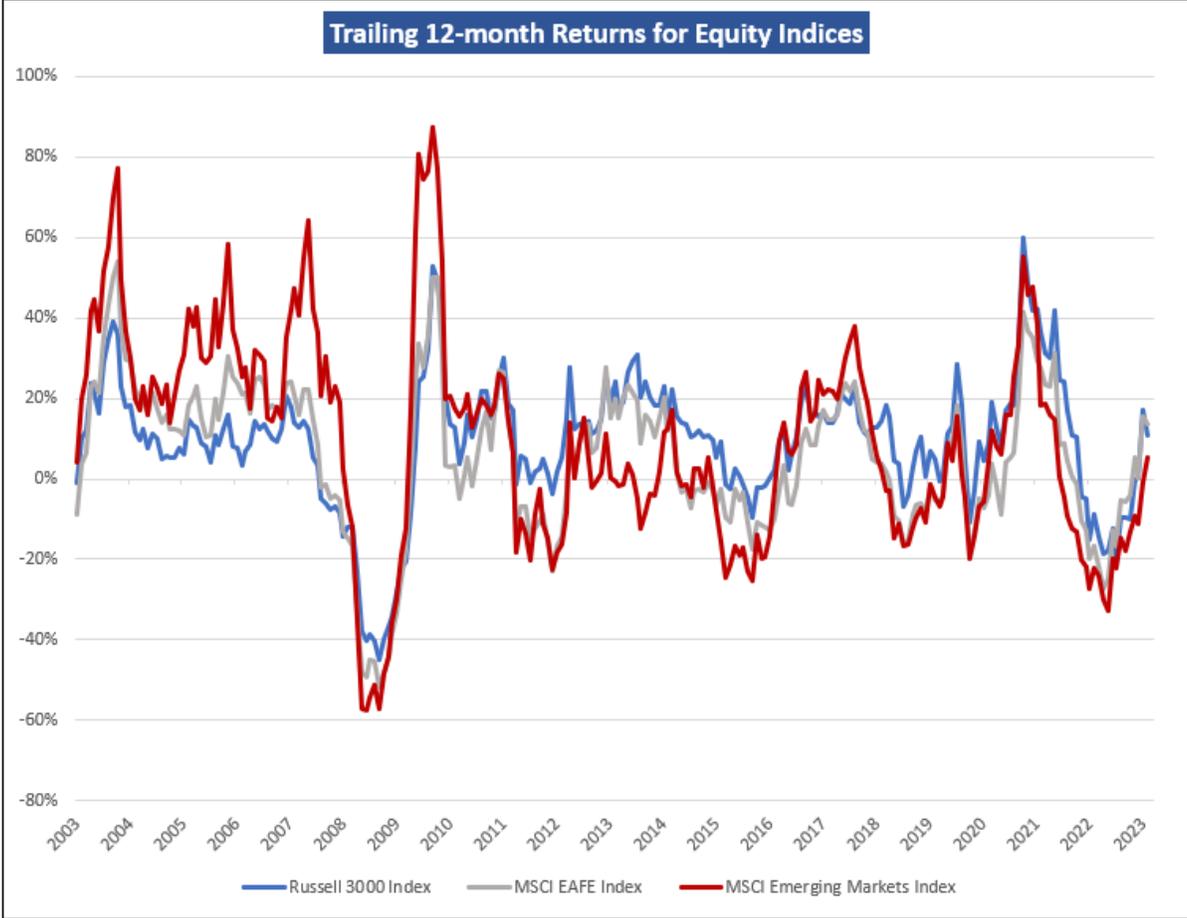
WORLD BOND MARKETS

World Bond Markets									
Maturity	10 Year				Data Range	YTD			
Region	RMI	Security		Yld	Low	Range	High	YTD Chg	
					◆ Avg ● Now				
1) Americas									
10) United States	☐	T 3 ⁷ / ₈ 08/33	⌵	4.216	3.305	◆ ●	4.338	+34.1	
11) Canada	☐	CAN2 ³ / ₄ 06/33	⌵	3.679	2.720	◆ ●	3.810	+38.2	
12) Brazil (USD)	☐	BRAZIL6 10/33	⌵	6.448	5.675	◆ ●	6.609	+36.5	
13) Argentina (USD)	☐	ARGENT8.28 33	⌵	0.000					
14) Mexico (USD)	☐	MEX3 ¹ / ₂ 02/34	⌵	5.797	5.078	◆ ●	5.978	-8.4	
2) EMEA									
20) United Kingdom	☐	UKT3 ¹ / ₄ 01/33	⌵	4.436	3.000	◆ ●	4.739	+77.9	
21) France	☐	FRTR 3 05/33	⌵	3.090	2.441	◆ ●	3.246	-.6	
22) Germany	☐	DBR 2.6 08/33	⌵	2.567	2.010	◆ ●	2.741	+.9	
23) Italy	☐	BTPS 4.35 33	⌵	4.229	3.746	◆ ●	4.601	-45.2	
24) Spain	☐	SPGB 3.55 33	⌵	3.586	2.950	◆ ●	3.751	-4.9	
25) Portugal	☐	PGB1.65 07/32	⌵	3.247	2.849	◆ ●	3.605	-32.6	
26) Sweden	☐	SGB1 ³ / ₄ 11/33	⌵	2.796	1.792	◆ ●	2.861	+48.1	
27) Netherlands	☐	NETHER2 ¹ / ₂ 33	⌵	2.903	2.259	◆ ●	3.087	+3.2	
28) Switzerland	☐	SWISS 3 ¹ / ₂ 33	⌵	0.918	.760	◆ ●	1.491	-62.6	
29) Greece	☐	GGB4 ¹ / ₄ 06/33	⌵	3.867	3.501	◆ ●	4.556	-63.8	
3) Asia/Pacific									
30) Japan	☐	JGB 0.4 06/33	⌵	0.658	.160	◆ ●	.663	+25.4	
31) Australia	☐	ACGB 3 11/33	⌵	4.137	3.180	◆ ●	4.319	+9.2	
32) New Zealand	☐	NZGB 3 ¹ / ₂ 33	⌵	4.995	3.895	◆ ●	5.124	+56.3	
33) South Korea	☐	KTGB ¹ / ₄ 06/33	⌵	3.845	3.138	◆ ●	3.977	+31.3	
34) China	☐	CGB2.67 05/33	⌵	2.577	2.534	◆ ●	2.919	-25.3	



MARKET RETURNS

Trailing 12-month returns over the last 20 years



RECENT NEWS

Fitch downgrades US debt on debt ceiling drama and governance worries

Source: CNN

Fitch cuts US credit rating to AA+; Treasury calls it 'arbitrary'

Source: The Reuters

Germany plans to double AI funding in race with China, U.S.

Source: Reuters

AI Won't Supercharge the US Economy

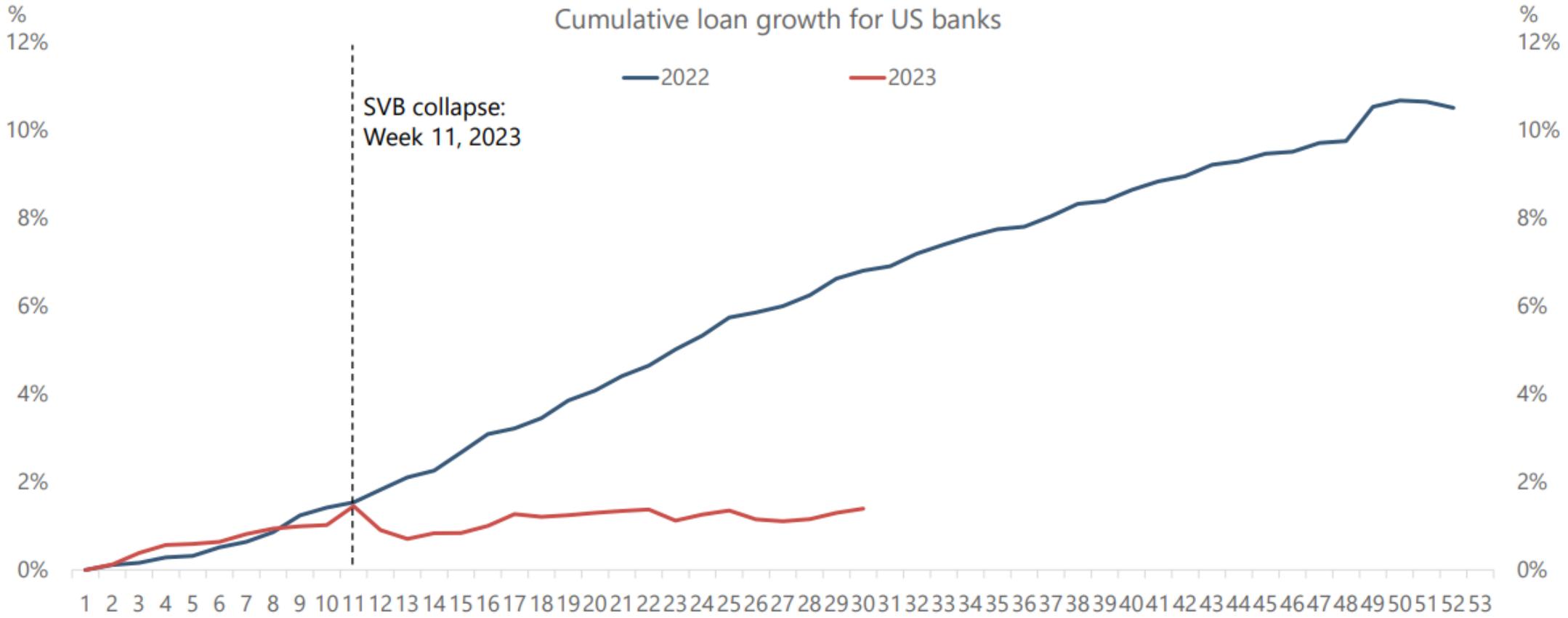
The technology will probably provide only a small boost to economic growth, but it could still have a significant impact in the long run.

Source: Bloomberg



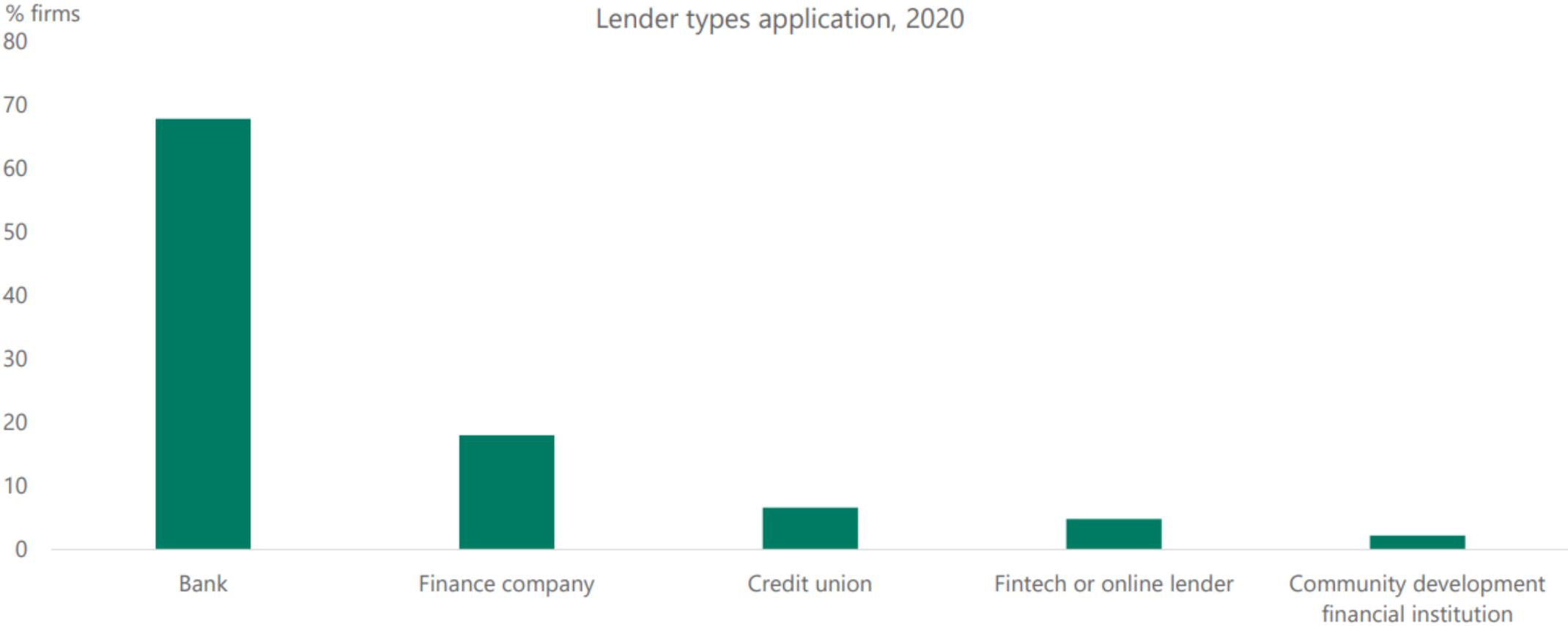
FOOD FOR THOUGHT

SVB having a permanent effect



FOOD FOR THOUGHT

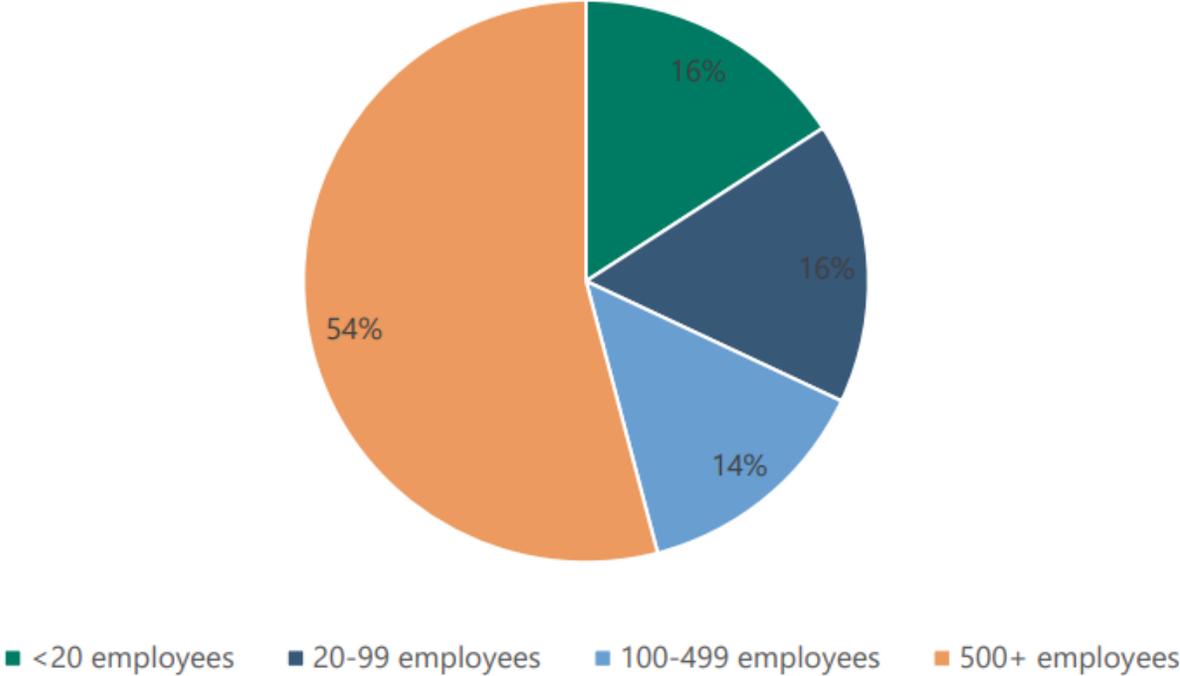
Banks are the most important source of financing for small businesses



FOOD FOR THOUGHT

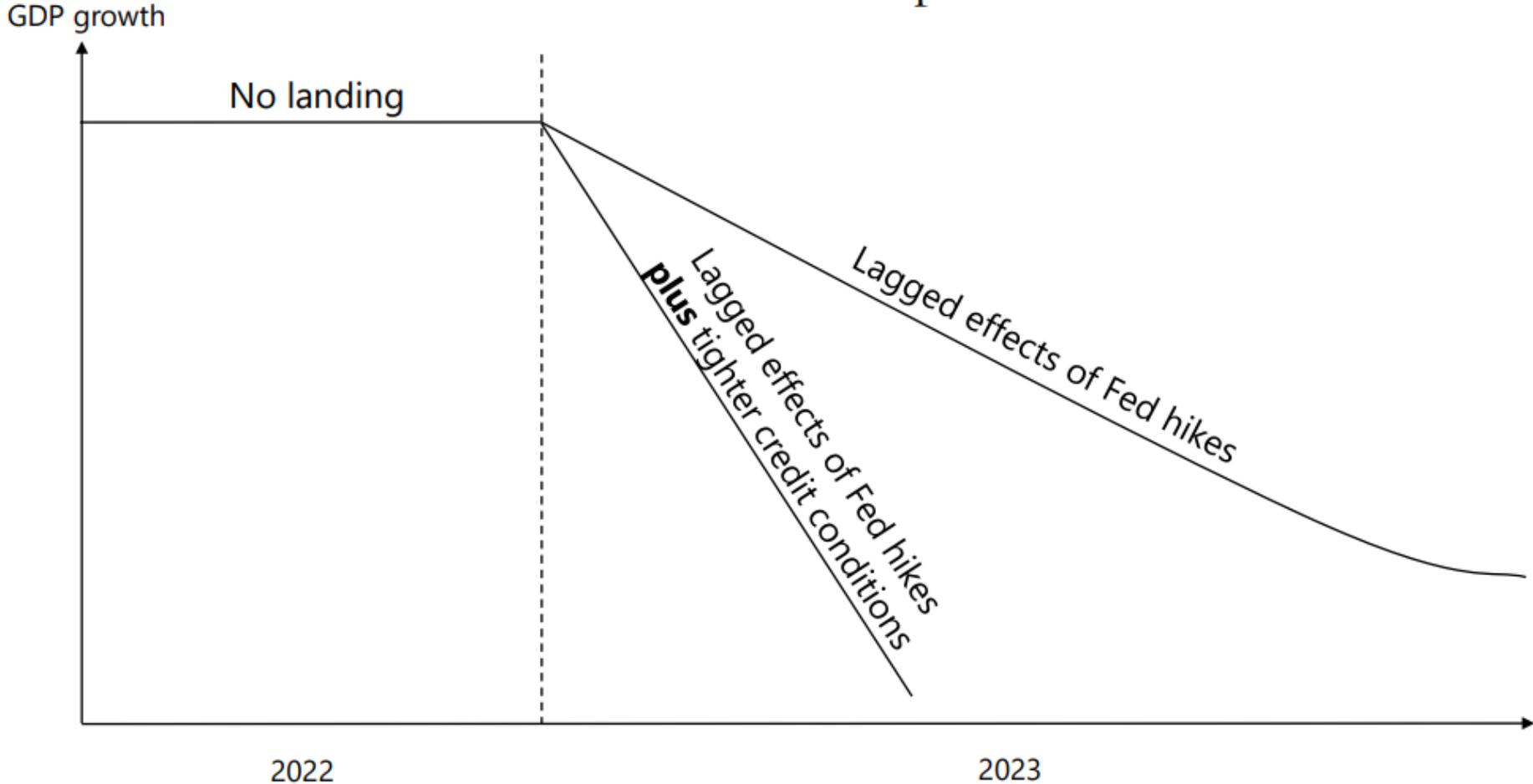
Half of US employment is in firms with fewer than 500 employees

Share of total employment by employment size of the firm, 2020



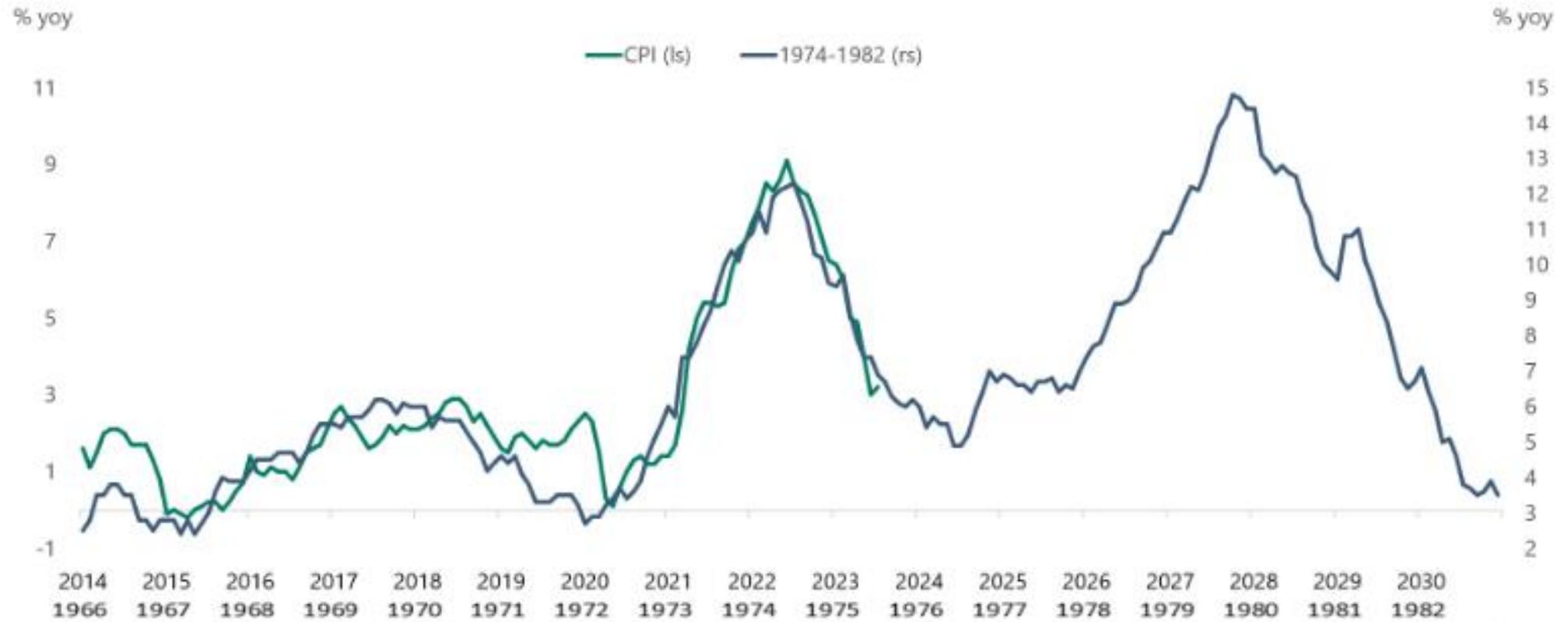
FOOD FOR THOUGHT

Lagged effects of Fed hikes combined with tighter credit conditions will create a sharper slowdown in the economy



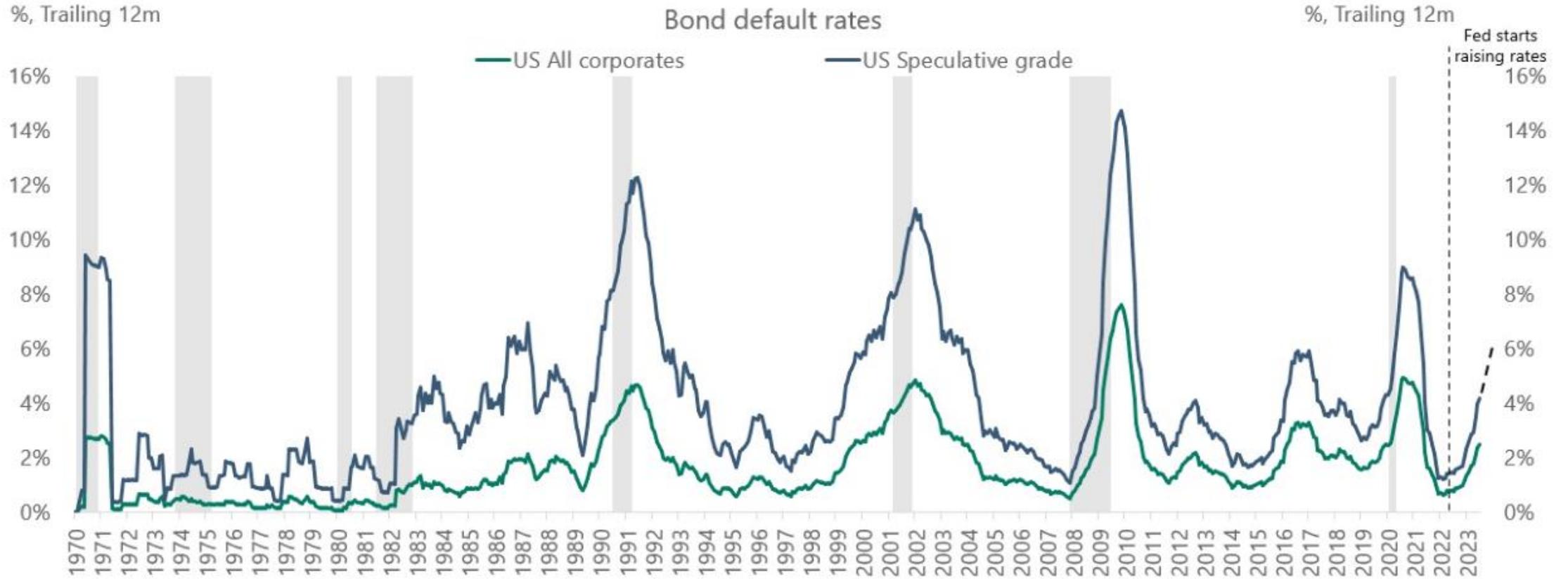
FOOD FOR THOUGHT

Inflation: Today vs 1970s



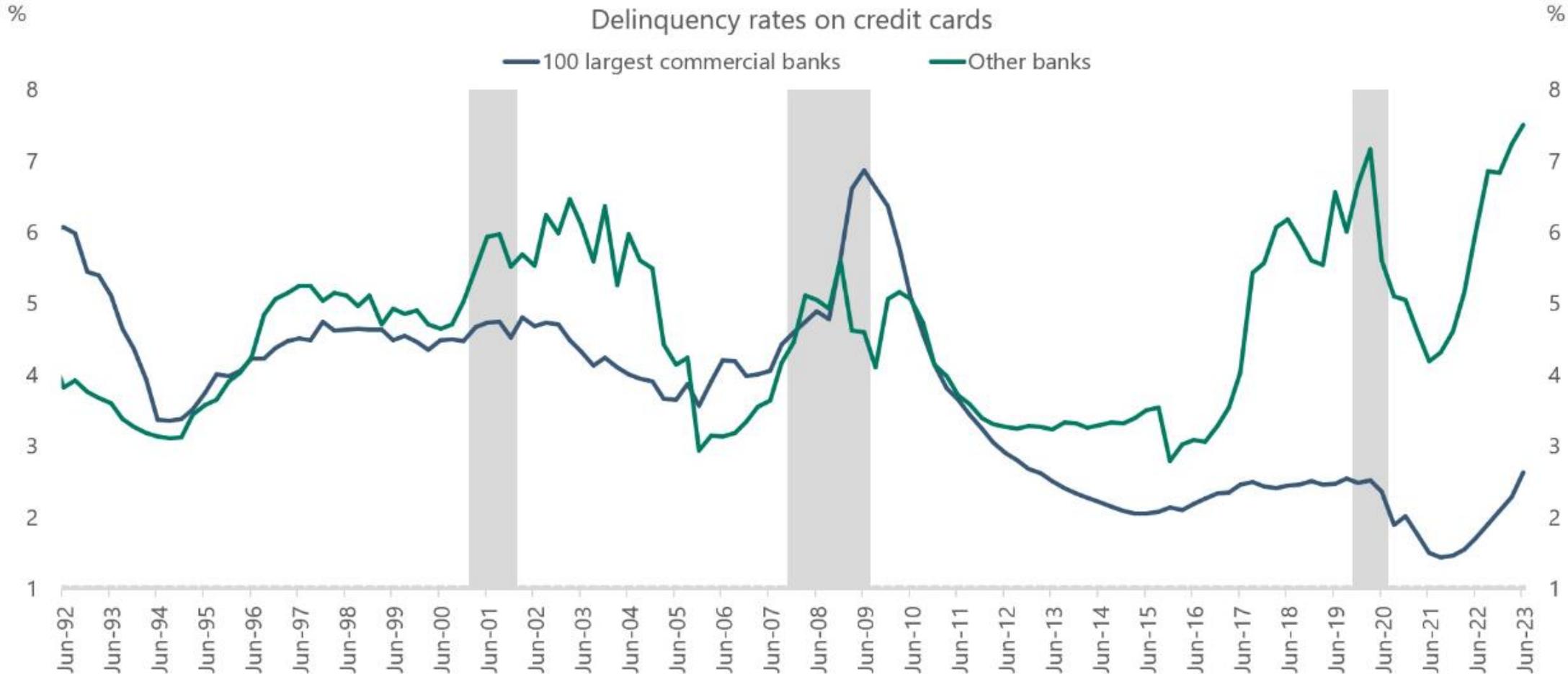
FOOD FOR THOUGHT

A default cycle has started, and markets are not paying attention



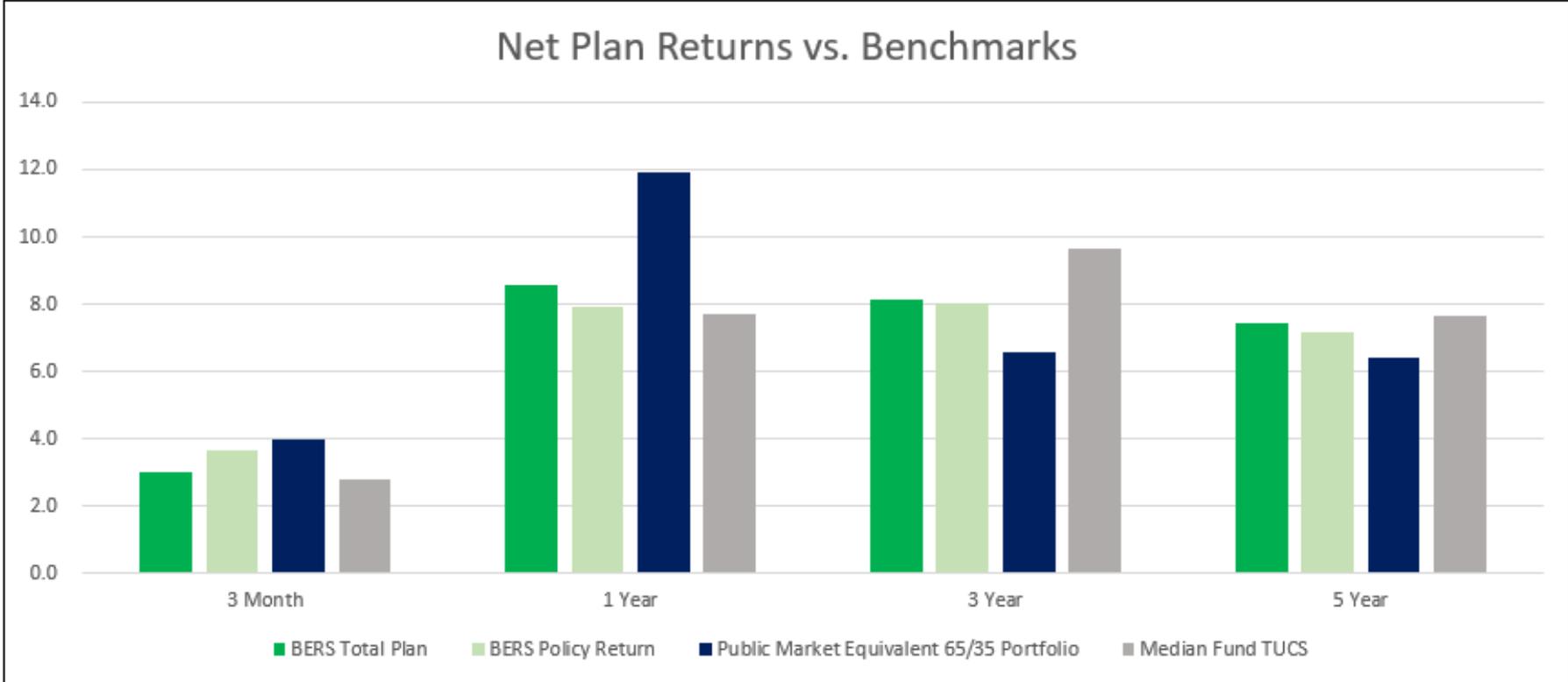
FOOD FOR THOUGHT

Credit card delinquency rates much higher for small banks



BERS PERFORMANCE REPORTING Q2-2023

BERS NET PLAN RETURNS AS OF 6/30/23



Aggregate Performance	3 Month	1 Year	3 Year	5 Year
BERS Total Plan	3.0	8.6	8.1	7.4
BERS Policy Return	3.7	7.9	8.1	7.1
Public Market Equivalent 65/35 Portfolio	4.0	11.9	6.6	6.4
Median Fund TUCS	2.8	7.7	9.7	7.7



BERS NET PUBLIC MARKET RETURNS BY STRATEGY AS OF 6/30/23

Investment Strategy	AUM				
	(Millions)	3 Month	1 Year	3 Year	5 Year
U.S. Equity	2,540	8.0	18.5	13.1	11.0
World ex-U.S.	684	2.9	19.3	6.5	4.9
Emerging Markets	429	1.6	4.8	2.4	0.0
Core Fixed Income	1,168	(0.8)	(0.6)	(4.0)	1.3
TIPS	256	(1.4)	(1.4)	(0.1)	2.5
High Yield	759	1.5	9.8	4.1	4.0
ETI	40	(1.2)	(0.4)	(3.0)	1.5
Cash	48	1.3	4.0	1.5	1.7



BERS PUBLIC MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	3 Month Excess	1 Year Excess	3 Year Excess	5 Year Excess
U.S. Equity	Russell 3000	(40)	(49)	(78)	(39)
World ex-U.S.	MSCI World ex-U.S. IMI	20	295	(241)	68
Emerging Markets	MSCI Emerging Markets	66	301	3	(92)
Core Fixed Income	NYC Custom Structured Index	3	26	1	(51)
TIPS	BB Global Inflation Linked TIPS	(2)	(3)	(1)	1
High Yield	NYC Custom High Yield Benchmark	(25)	71	98	71
ETI	NYC Custom ETI Benchmark	(68)	9	6	55
Total BERS	BERS Policy Benchmark	(66)	62	7	27

Source: State Street



BERS NET PRIVATE MANAGER RETURNS BY STRATEGY AS OF 6/30/23

Investment Strategy	1 Year	3 Year	5 Year	10 Year	Since Inception
Private Equity	(0.8)	24.3	17.5	16.7	14.1
Private Real Estate Core	(2.0)	10.0	8.3	9.0	9.1
Private Real Estate Non-Core (Opp.)	(2.1)	13.1	9.4	12.8	12.6
Infrastructure	7.7	12.8	11.6	n/a	12.2
Opportunistic Fixed*	9.1	n/a	n/a	n/a	12.5

Returns for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: State Street, StepStone Group



BERS PRIVATE MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	1 Year Excess	3 Year Excess	5 Year Excess	10 Year Excess	Since Inception Excess
Private Equity	Russell 3000	630	760	750	560	350
Private Real Estate Core	NCREIF ODCE Net	192	254	169	53	(22)
Private Real Estate Non-Core (Opp.)	NCREIF ODCE Net	182	569	288	435	330
Infrastructure	5-year Rolling CPI +400bp	(20)	490	370	n/a	430
Opportunistic Fixed*	50% JPM Gbl HY/50% CS Levered Loan	(58)	n/a	n/a	n/a	826

Returns vs. benchmark for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: State Street, StepStone Group



BERS SUMMARY OF REBALANCING ACTIVITIES

- Activities between April 1, 2023 and June 30, 2023

From		Amount (\$MM)	To	Amount (\$MM)
World ex USA	Large & Mid Cap	15	Cash Desk	93
US Equity	Large & Mid Cap	98	Fixed Income	Intermediate Term Treasury
				Mortgages
EAFE	Small Cap	10		Credit
Fixed Income	Intermediate Term Treasury	10		
	TIPS	30		
Total Outflow		163	Total Inflow	163



RISK MANAGEMENT

QUARTERLY REVIEW

BERS: TOTAL PLAN SUMMARY

Summary	1. Market Portfolio		2. Policy Benchmark		3. BERS	
	Q2 '23	Change	Q2 '23	Change	Q2 '23	Change
Portfolio Construction						
Equity Allocation	65.0%	+0.0%	68.0%	+0.0%	70.0%	+0.3%
Interest Rates Duration (*)	2.2	-0.07	1.5	-0.03	1.4	-0.04
Credit Spread Duration (*)	1.3	-0.01	0.9	-0.01	0.9	+0.04
Portfolio Risks						
Total Risk	11.7%	-0.7%	11.7%	-0.7%	13.0%	-0.8%
Active Risk	n/a	n/a	n/a	n/a	2.4%	-0.1%
Beta to S&P 500	0.61	-0.00	0.62	-0.00	0.68	-0.01

Notes

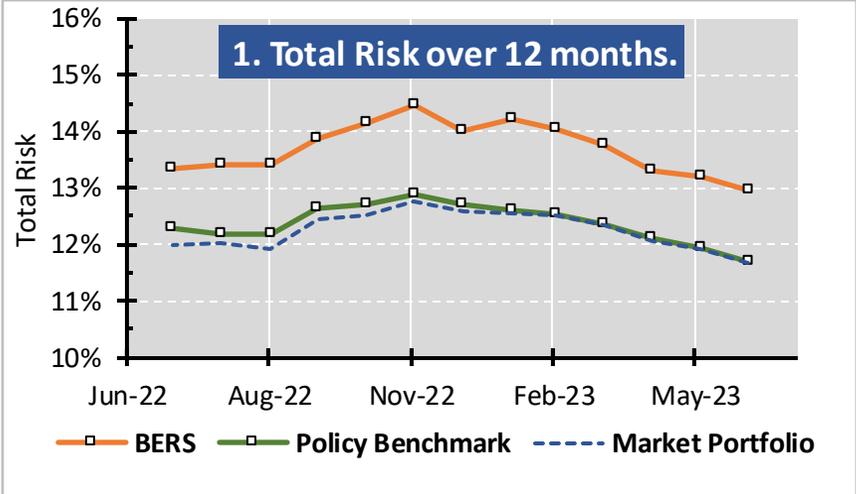
(*) - Public Markets Only

Market Portfolio:

65% MSCI ACWI + 35% Barclays US Agg

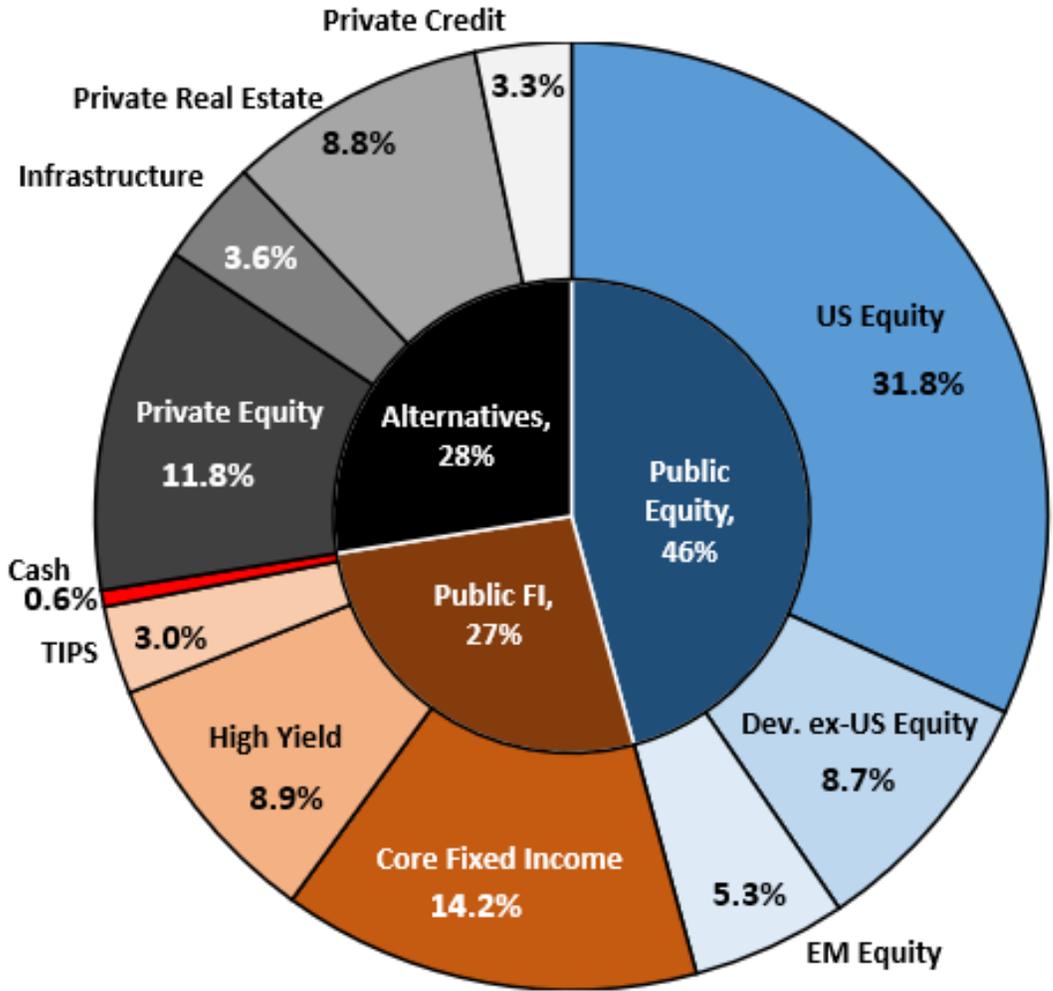
Policy Benchmark:

31% US Equity + 10% Developed Equity + 6% EM Equity + 16% Core FI + 8% HY + 3% Inflation Linked Bonds + 9% Private Equity + 4% RE Core + 4% RE Opportunistic + 4% Infrastructure + 5% Private Credit

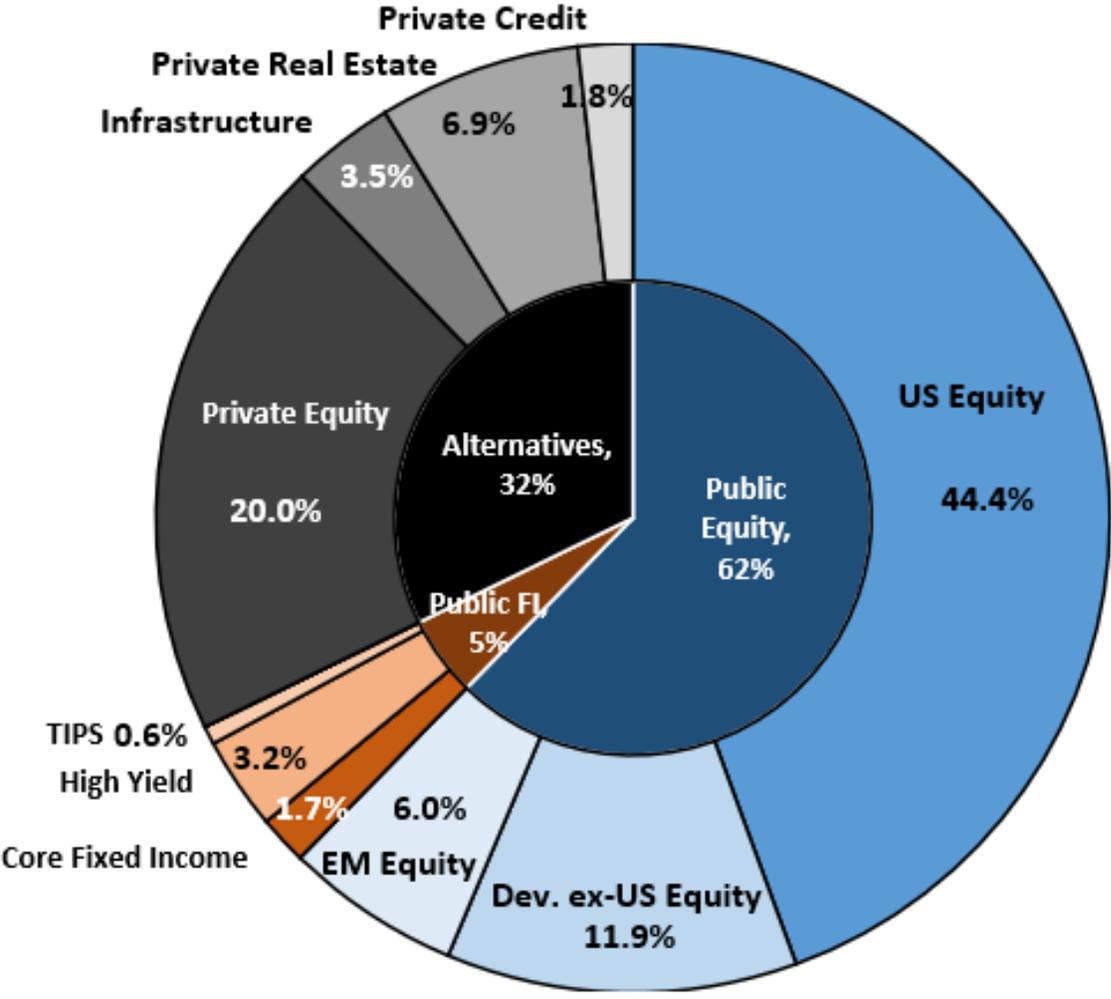


BERS: TWO VIEWS OF ALLOCATION

1. Asset Allocation

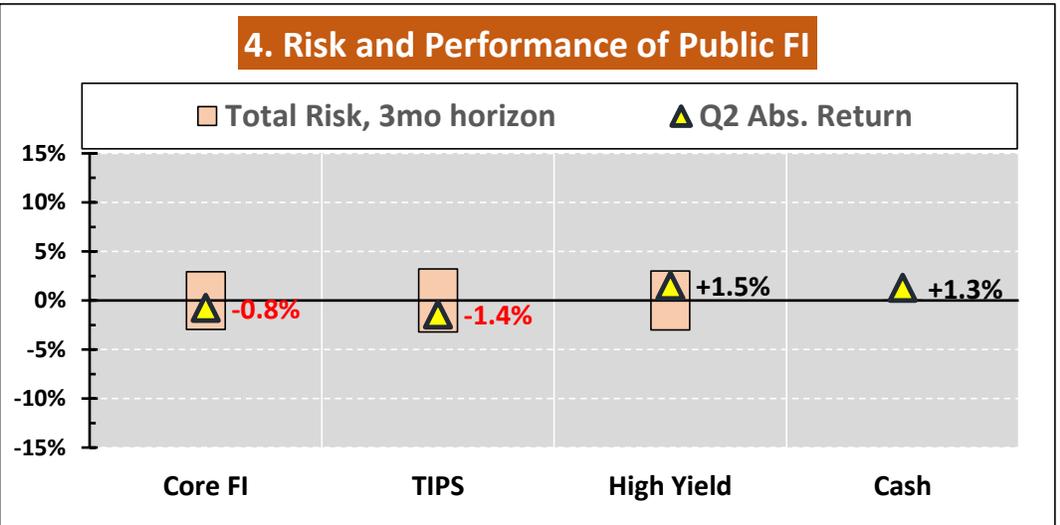
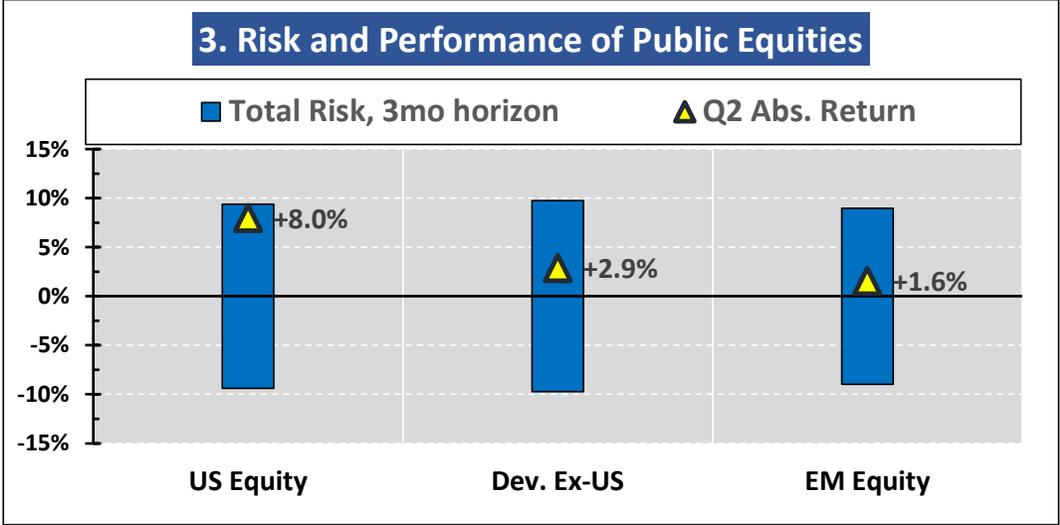
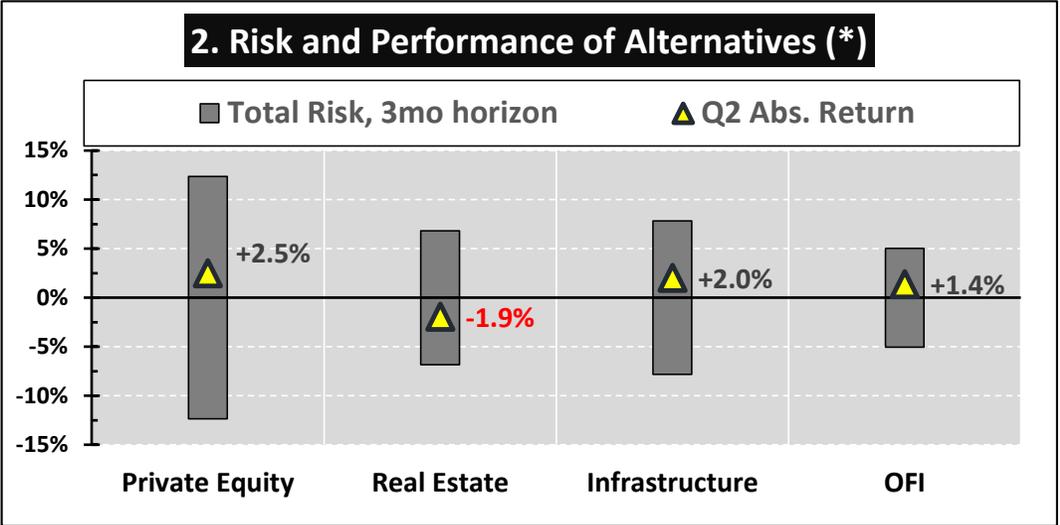
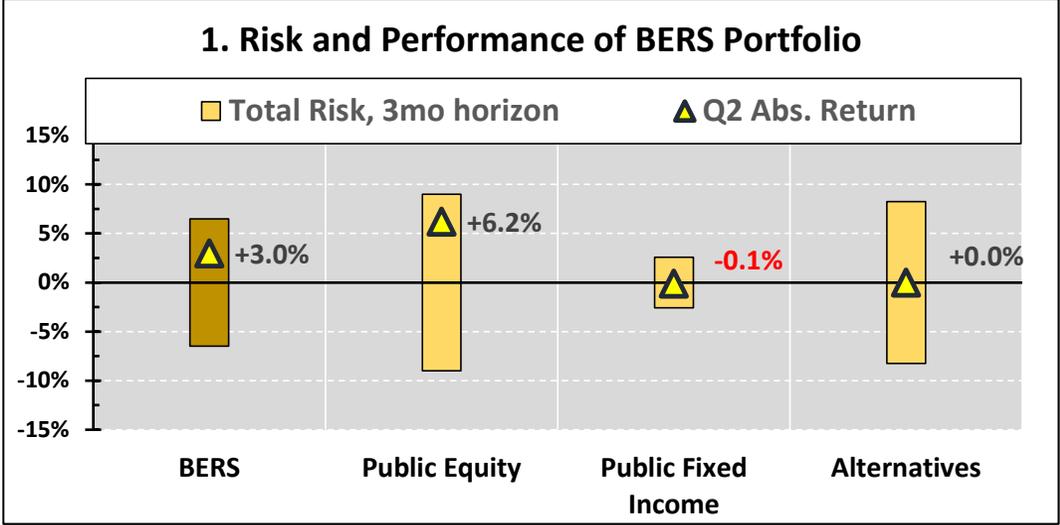


2. Risk Allocation



BERS: TOTAL RISK AND RETURN

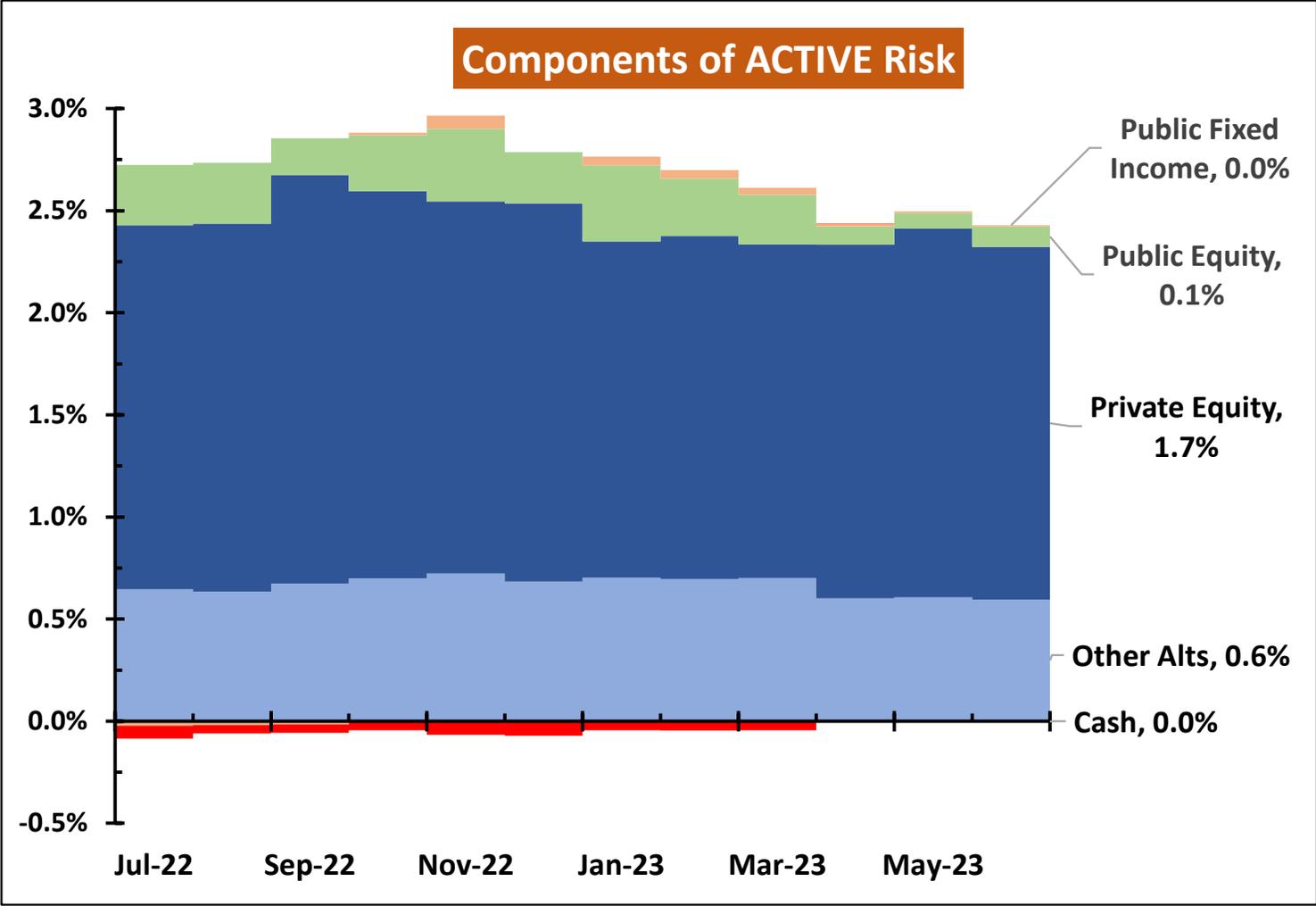
How does 3mo Total Risk forecast compare to the Q2 Total Returns?



Source: MSCI BarraOne
 (*) Based on State Street Accounting returns

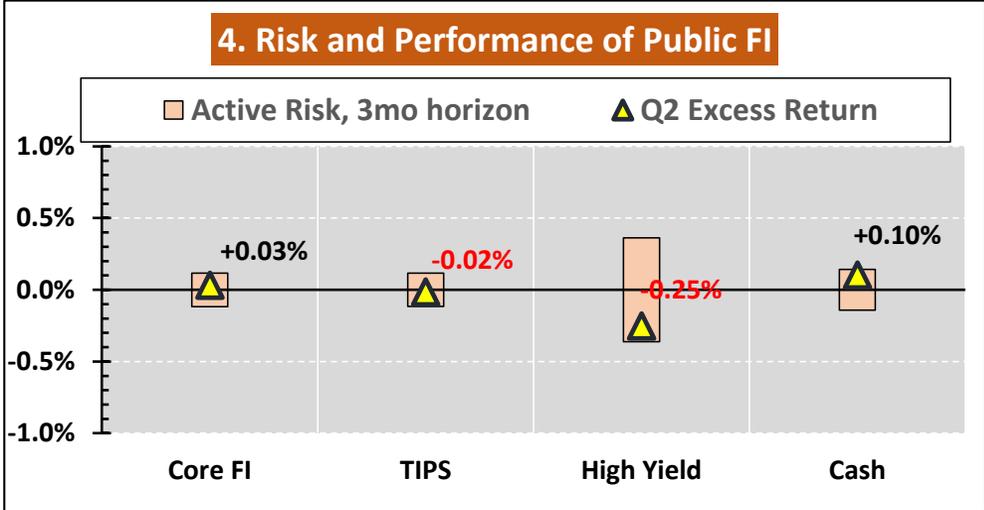
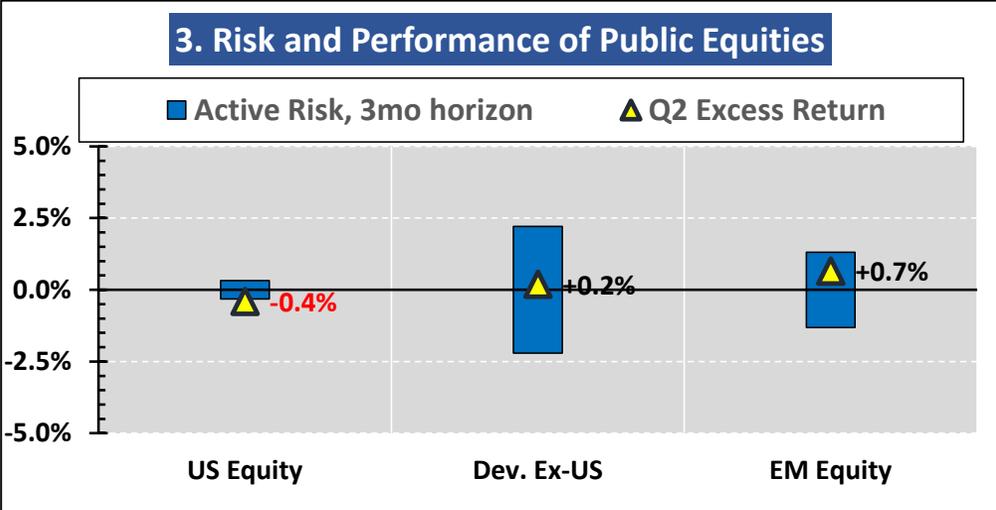
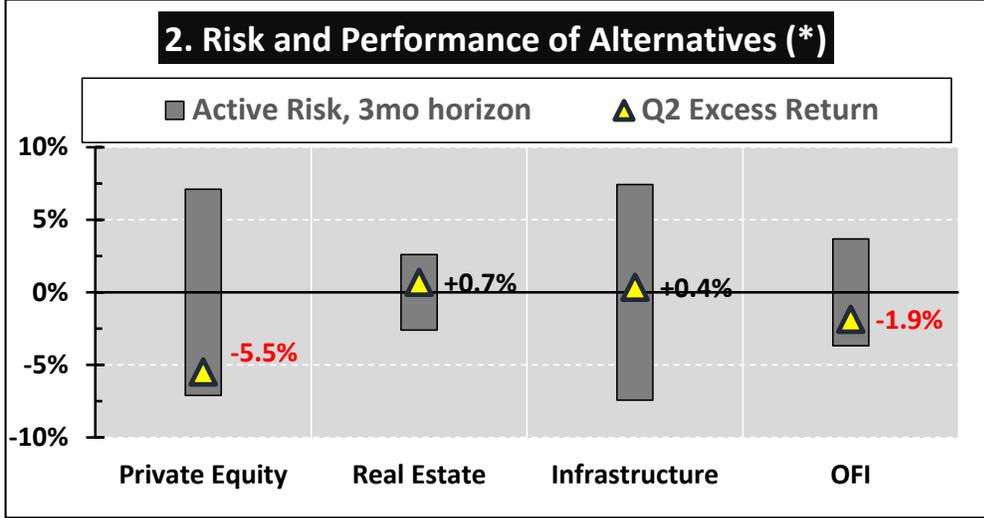
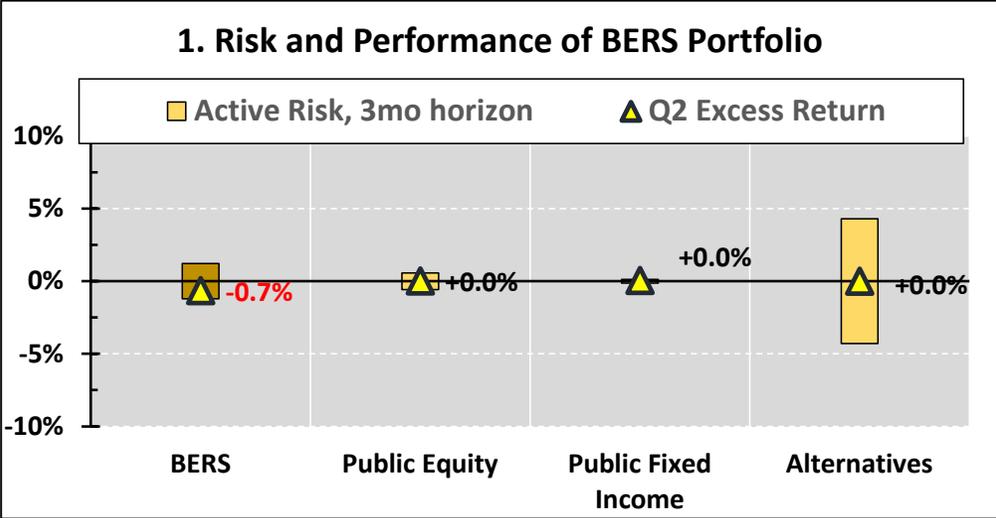
BERS: ACTIVE RISK

What are the contributors to **Active Risk**?



BERS: ACTIVE RISK AND EXCESS RETURN

How does 3mo **Active Risk** forecast compare to the Q2 **Excess Returns**?



FORWARD-LOOKING MARKETS: WORST MONTHLY SHOCK

Equities



Rates



Commodities



BERS: FORWARD-LOOKING PERFORMANCE

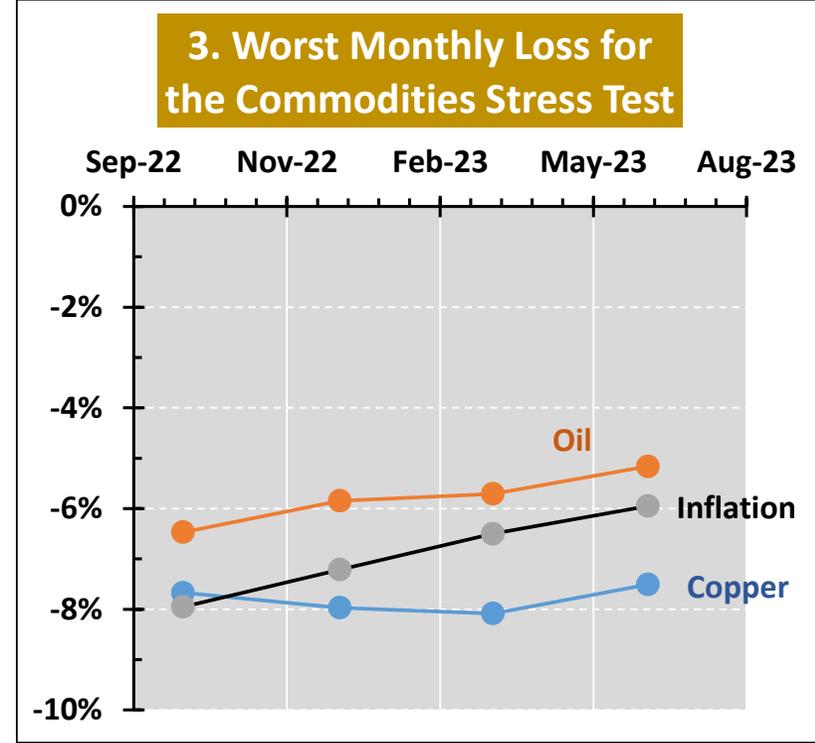
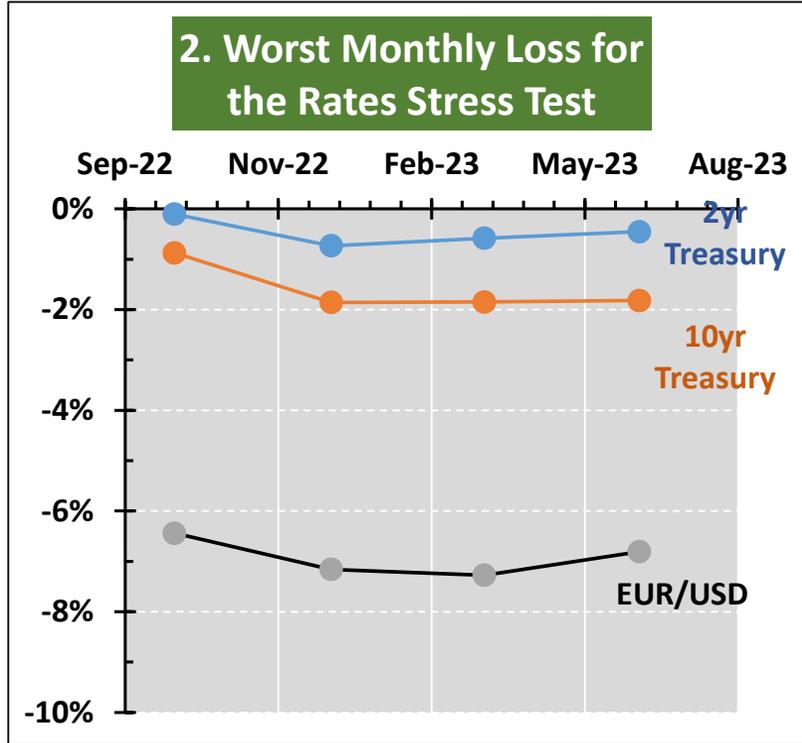
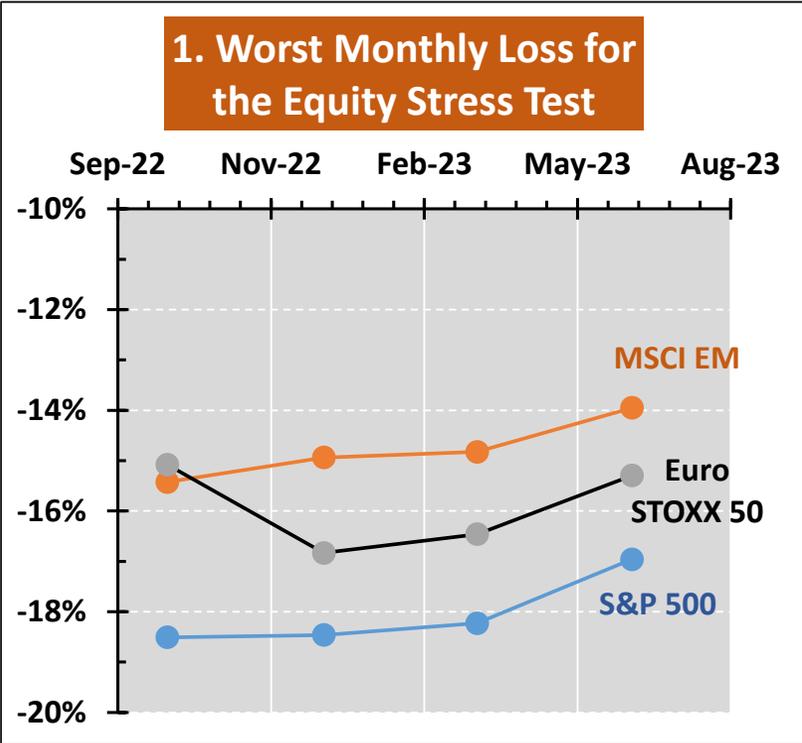
How will the portfolio perform under the worst monthly market shock?

				1. Absolute Return		2. Excess Return	
Market Factors			Shock, %	Risk On	Risk Off	Risk On	Risk Off
Equities	1. S&P 500	Price	+25.1%	17.0%	-17.0%	+1.3%	-1.3%
	2. MSCI EM	Price	+25.5%	14.0%	-14.0%	+1.2%	-1.2%
	3. Euro STOXX 50	Price	+29.6%	15.4%	-15.3%	+1.4%	-1.4%
Rates	4. 2yr Treasury	Yield	-1.4%	0.6%	-0.5%	-0.2%	+0.2%
	5. 10yr Treasury	Yield	-1.6%	2.0%	-1.8%	-0.2%	+0.2%
	6. EUR/USD	Rate	+10.2%	6.8%	-6.8%	+0.7%	-0.7%
Commodities	7. Copper	Price	+33.3%	7.5%	-7.5%	+0.6%	-0.6%
	8. Oil	Price	+56.3%	5.2%	-5.2%	+0.4%	-0.4%
	9. Inflation	Rate	+2.7%	6.0%	-5.9%	+0.4%	-0.4%

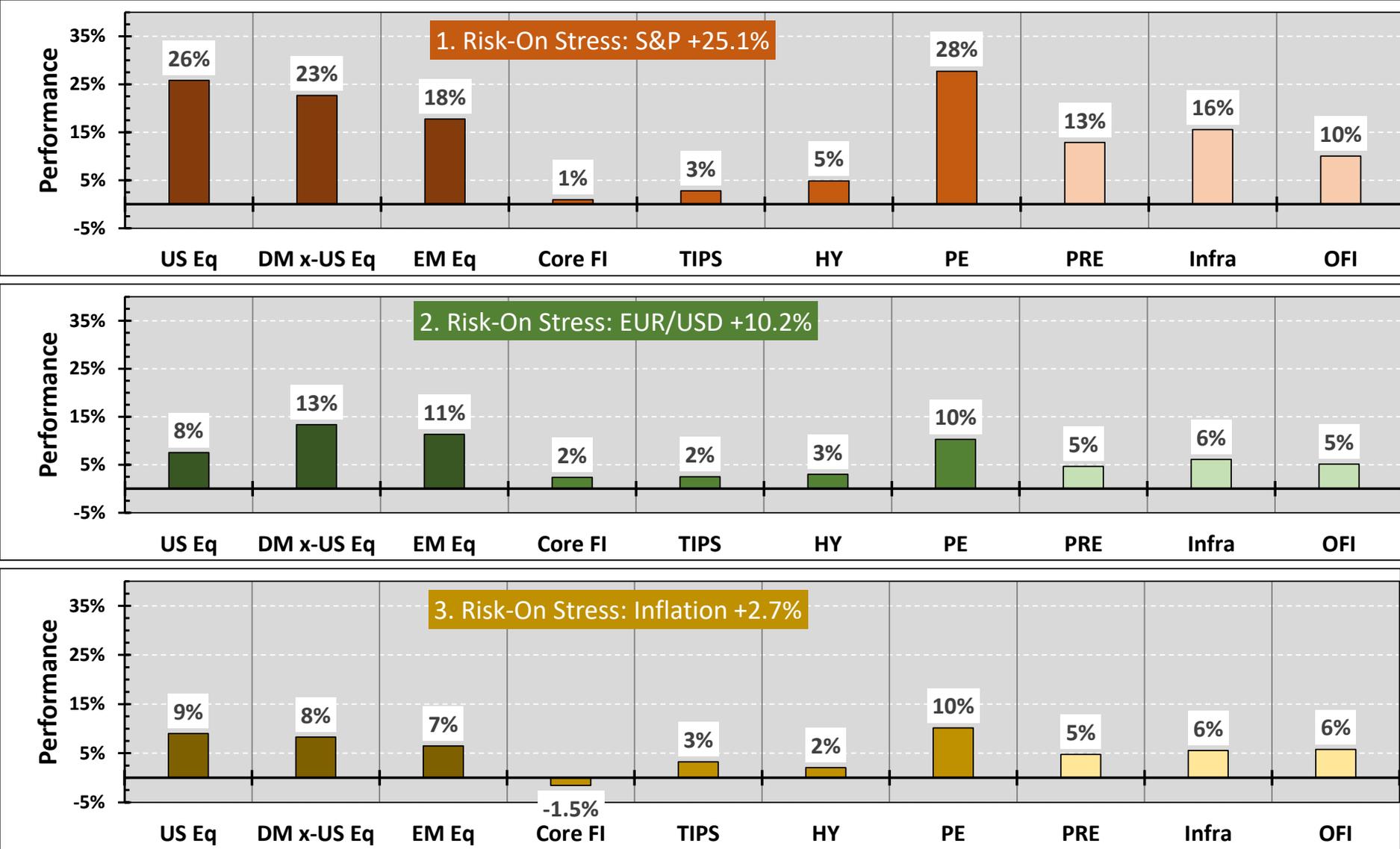


BERS: FORWARD-LOOKING PERFORMANCE

How did the "Worst Monthly Loss" evolve over time?



BERS: FORWARD-LOOKING PERFORMANCE



Invitation to Join Labor Rights Investor
Network:

About the Labour Rights Investor Network: An Education and Exchange Platform on Freedom of Association and Collective Bargaining

What is the Labour Rights Investor Network?

The 'Labour Rights Investor Network' is a global investor network focusing on the rights to freedom of association and collective bargaining. The Network assists investors by acting as an education and exchange platform and a place to connect on issues related to freedom of association and collective bargaining.

The Network is composed of investors who commit to integrating labour rights into their stewardship practices, as outlined in the Investor Statement on the Rights to Freedom of Association and Collective Bargaining. The Network is open to asset managers, asset owners and other investment service providers.

What will the Network do?

The Coordinating Committee (detailed below) will facilitate knowledge building by providing resources and activities to meet the needs identified by members. This could include information about legal frameworks and risks related to freedom of association and collective bargaining, individual companies' practices, sector-wide risks, or relevant policy developments. In addition, the Coordinating Committee may also undertake activities to support individual members or groups of members when it is relevant to do so. Membership in the Network does not require participation in any particular activity, including any engagements. Members can opt in to chosen activities of interest.

After the initial year and as the Network progresses, the Coordinating Committee will consult with the investor members regarding the Network, including its governance structure and its activities.

Build knowledge on freedom of association and collective bargaining

The Coordinating Committee will organise the activities of the Network and provide practical resources to help advance investor knowledge of freedom of association and collective bargaining, so that investors can apply this understanding of the topic to strengthen stewardship activities.

Resources will include:

- Information about trade unions and the rights to freedom of association and collective bargaining;
- Practical workshops on responding to engagement challenges;
- Education sessions focused on particular geographies, sectors, or themes;
- Written resources that can be utilised by members in stewardship and internal engagements.

Provide information on company-level risks

The Labour Rights Investor Network will act as a platform through which members receive public information from other investors and trade unions globally regarding issues related to freedom of association and collective bargaining at specific companies or industries. The Coordinating Committee will not coordinate collaborative company engagement activities but will share and support relevant company engagement activities organised by members or other groups. The Coordinating Committee may also help support members in evaluating company statements.

Facilitate members embedding labour rights in the investment chain

Where there is member interest, the Network will support activities to incorporate freedom of association and collective bargaining throughout the investment chain. For example, the Network can facilitate sharing good practices on how to incorporate labour rights in engagement with service providers, such as ESG rating agencies or asset managers. The Network can also inform and support members participating in relevant policy consultations that shape company or investor activities in relation to freedom of association and collective bargaining.

What does it mean to be a member?

Expectations of members

By joining the Network, members commit to:

- Publicly endorse the Investor Statement on the Rights to Freedom of Association and Collective Bargaining by adding their organisation's name. This statement will be public on the Network's webpage, hosted on the Global Unions' Committee on Workers' Capital (CWC) (detailed below) website.
- Join regular Network meetings.
- Engage with the Network's resources and events.
- Work to incorporate labour rights into their engagement and stewardship activities.
- Promote labour rights and the Network itself where there are opportunities to do so.

Members are prohibited from sharing confidential, proprietary or material non-public information. If a network member inadvertently receives information believed to be material non-public information, then the requirements under the relevant securities laws apply.

Network members are invited to show leadership within the Network on the stewardship of labour rights, including leading relevant workstreams of interest. Members are encouraged to provide input into the activities of the Network.

How to join the Network?

If an investor has questions and would like to discuss the Network they should contact the Coordinating Committee detailed below.

To join the Network, the investor agrees to:

- Provide the Coordinating Committee with their organisation's current assets under management and the name and contact information of their representative for purposes of Network communications and activities. Members may be contacted by any member of the Coordinating Committee listed below.
- Act in line with and fulfil the expectations outlined in this document.
- Be listed publicly, unless an investor member requests otherwise. Assets under management will only be disclosed in aggregate.

Leaving the Network

Investors can join the Network on an ongoing basis, for an indefinite amount of time. If a member would like to leave the Network at any time, for any reason, they should contact the Coordinating Committee. The member's name will then be removed from the online version of the investor statement. Should there be a significant change in the running, structure or activities of the Network, as detailed in this document, all investor members will be consulted.

What is the governance of the Network?

The Network will be coordinated by the Global Unions' Committee on Workers' Capital (CWC), with the support of a Coordinating Committee of CWC participant organisations.

Coordinating Committee responsibilities

- Coordinate regular Network meetings for members, provide agendas and chair meetings.
- Develop and organise a programme of knowledge-sharing and capacity-building resources and activities for members by drawing on expertise and capabilities within and beyond the global trade union movement and other investor members.
- Offer interested members expertise and support on labour rights, including by drawing on a global network of labour rights experts.
- Promote the Network, including engaging with prospective members and organising opportunities for public communication. The Coordinating Committee is able to speak on behalf of the Network, but will not speak directly on behalf of individual investors or use names in communications without specific permission from the investor to do so.
- Provide space for unions and investors to exchange information related to labour rights.
- Seek input and feedback from investor members on activities and the running of the network.

Network Coordinating Committee

The following organisations are represented on the Coordinating Committee.

- **UNI Global Union** - UNI Global Union is the global trade union federation for the skills and services sectors, representing more than 20 million workers across 150 different countries. UNI Global Union's investor engagement team works with investors to support their engagement and stewardship with companies and across sub-sectors in the services sectors. UNI has also worked extensively in supporting investors to advance their knowledge, policy and practice on labour rights.
- **UFCW** - The United Food and Commercial Workers International Union (UFCW) represents 1.3 million workers in the U.S. and Canada in the food retail, food processing, and non-food retail industries. UFCW's capital stewardship department supports investor engagement with companies to drive more sustainable returns.
- **AFL-CIO** - The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) is a federation of 60 national and international labour unions that represent 12.5 million working people. The AFL-CIO's Capital Stewardship Program seeks to ensure that retirement and employee benefit funds invested on behalf of working people are invested and managed in their long-term best interests.
- **SOC Investment Group** - The SOC Investment Group works with pension funds sponsored by unions affiliated with the Strategic Organizing Center (SOC), a coalition of unions representing millions of members, to enhance long-term shareholder value through active ownership. These funds have over \$250 billion in assets under management. The SOC Investment Group supports shareholder initiatives to ensure director accountability, sound human rights practices, and strong governance policies, reflecting the long-term interests of workers and their families invested in union pension funds.

- **CWC Secretariat** - The Global Unions' Committee on Workers' Capital (CWC) is an international labour network of over 600 labour representatives and asset owner board members that advocate for the responsible investment of workers' retirement savings. Founded over 20 years ago, it is a joint initiative of the International Trade Union Confederation, the Global Union Federations and the Trade Union Advisory Committee to the OECD. The Secretariat of the CWC is housed at the Shareholder Association for Research and Education (SHARE) in Canada.

Investor Statement on the Rights to Freedom of Association and Collective Bargaining

The undersigned investors and fiduciaries representing [XX] institutions and [XX] in combined assets under management or advice are writing to express our expectations regarding the rights to freedom of association and collective bargaining.

Labour rights are human rights.¹ The rights to freedom of association and collective bargaining are fundamental pillars of human freedom, established in the International Labour Organization Core Conventions, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Sustainable Development Goals. These rights guarantee that individual workers can join together in protected concerted workplace activity to better their working lives, improve the companies they work for, and contribute to the advancement of society.

Companies that respect labour rights reap many benefits, such as greater productivity, safer workplaces, and improved employee engagement.² Implementing labour rights requires varied approaches across different businesses, regions, and jurisdictions. The undersigned investors agree to three requests to boards and senior management at investee companies:

- Implement a strong governance framework that articulates the board's responsibility for oversight of labour rights based on ILO Core Conventions.
- Take action to respect workers' exercise of their fundamental rights to freedom of association and collective bargaining, for example, but not limited to: adopting labour rights due diligence processes, training management at all levels to meet labour rights standards, and committing to non-interference when workers seek to form or join unions.
- Provide enhanced disclosure of labour rights-related metrics – for example, but not limited to: percentage of workers covered by collective bargaining agreements, pending litigation and regulatory investigations regarding alleged labour rights violations, and any expenditure of company resources on union avoidance activities – which allow investors to assess company labour risk.

We encourage and welcome other investors and their representatives to join us in signing this statement.

¹International Labour Organization (ILO) Core Conventions and the ILO Declaration on Fundamental Principles and Rights at Work: ILO, Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87), https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312232; ILO, Right to Organize and Collective Bargaining Convention, 1949 (No. 98), https://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID,P12100_LANG_CODE:312243,en:NO; ILO, ILO Declaration on Fundamental Principles and Rights at Work and its Follow-Up (adopted 1998, amended 2022), https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/normativeinstrument/wcms_716594.pdf; [United Nations Guiding Principles on Business and Human Rights \(UNGPs\)](#); [Organization for Economic Co-operation and Development \(OECD\) Guidelines for Multinational Enterprises \(MNEs\)](#); [United Nations Universal Declaration of Human Rights](#); [UN Sustainable Development Goals, Goal 8](#).

²See text and citations of Global Unions' Committee on Workers' Capital, *Shared Prosperity: The Investor Case for Freedom of Association and Collective Bargaining* (November 2022), <https://www.workerscapital.org/our-resources/shared-prosperity-the-investor-case-for-freedom-of-association-and-collective-bargaining/>.

Update on BAM University:

NON-INVESTMENT MATERIAL -
QUARTERLY PERFORMANCE
REPORTING SECTION (Public Reports):

State Street Quarterly Fund Performance Overview (Public):



New York City
Board of Education Retirement System
Performance Overview as of June 30, 2023

Total Fund Overview



New York City Board of Education Retirement System

Table of Contents:

Consultant's Commentary & Performance Charts	p.3
Appendix A - Consolidated Performance Report	p.32
Appendix B - Public Markets Manager Performance Detail	p.38
Appendix C - Alternative Assets Manager Performance Detail	p.46
Appendix D - Footnotes	p.56



Through June 30, 2023

New York City Board of Education Retirement System (BERS) **Consultant's Commentary – Through June 30, 2023**

Total Fund Performance

The Board of Education Retirement System (BERS) Total Fund returned +2.99% net of fees for the quarter ended June 30, 2023, versus the policy benchmark's return of +3.65%. For the fiscal year to date as of June 30, 2023, the Total Fund returned +8.55% net of fees, above the benchmark return of +7.93%.

Total Fund Asset Allocation

As of June 30, 2023, the BERS Total Fund had \$8.50 billion, up from \$8.26 billion as of March 31, 2023. The quarterly return was behind its benchmark return due to poor selection while the asset allocation contributed modestly. Private equity, high yield, opportunistic fixed income and domestic equities were the areas that detracted during the quarter.

For the fiscal year to date period, the return was above its benchmark due to the selection effect while asset allocation detracted somewhat.

U.S. Equity Commentary

As of June 30, 2023, U.S. Equity was \$2.54 billion or represented 29.9% of the BERS Total Fund. The U.S. equity composite was positive in the second quarter of 2023 returning +7.98%. This performance was below the Russell 3000 index return of +8.39%.

Active U.S. Equity Managers

Wellington returned +2.10% during the quarter, below the S&P Midcap 400 Index return of +4.85%. For the fiscal year to date as of June 30, 2023, Wellington returned +11.81% versus +17.61% for the S&P Midcap 400 Index.

- Security selection was the primary driver of relative underperformance. Weak selection in industrials, health care and materials were partially offset by selection in financials and utilities. Sector allocation, a result of the bottom-up stock selection process, contributed to returns. Allocation effect was driven by the underweight to utilities and real estate and overweight to industrials, but partially offset by the overweight to materials and financials.
- At the company specific level, the top two relative contributors were out of benchmark allocations to First Citizens and CarMax, while the top two relative detractors were an out of benchmark allocation to FMC and an overweight to Genpact.



Through June 30, 2023

Wasatch returned +6.72% during the quarter, below the Russell 2000 Growth Index return of +7.05%. For the fiscal year to date as of June 30, 2023, Wasatch returned +17.54% versus +18.53% for the Russell 2000 Growth Index.

- A detractor from the strategy performance was Fox Factory Holding Corp. (FOXF), which produces high-performance shock absorbers and suspension components for mountain bikes, offroad vehicles and trucks. Amid the Covid-19 pandemic, the company performed exceptionally well as consumers bought bikes for enjoyment during their “staycations.” As bike production eventually exceeded demand, however, inventories grew too large. The stock price fell as some investors worried the decline could be as large as -40% or -50%. Fears of a recession also weighed on the stock price.

- The second quarter’s top contributor to strategy performance was Trex Co., Inc. (TREX). The company manufactures high-performance composite (non-wood) decking and accessories. Trex was a laggard in 2022 as fears of rising interest rates disproportionately impacted the shares of higher-growth and housing-related companies. Trex stock price rebounded in 2023 as it is believed that the company would continue to take share within the composite-decking market and from traditional suppliers of wood products, which have shorter lifespans and require more upkeep than composites.

Legato returned +2.81% during the quarter, below the Russell 2000 (Daily) return of +5.21%. For the fiscal year to date as of June 30, 2023, Legato returned +13.31% versus +12.31% for the Russell 2000 (Daily).

[World ex-USA Commentary](#)

As of June 30, 2023, World ex-USA Equity was \$683.8 million (8.1% of assets) of the BERS Total Fund. World ex-USA Equity returned +2.87% in the second quarter of 2023 versus +2.67% for the NYC Developed Equity benchmark.

[Active World ex-USA Equity Managers](#)

Sprucegrove returned +4.60% during the quarter versus +3.03% for NYC Developed Value Benchmark. For the fiscal year to date as of June 30, 2023, Sprucegrove returned +22.33% versus +17.41% for the NYC Developed Value Benchmark.

- The portfolio continues to represent high quality value style holdings with a projected ROE of 15.1%, which is higher than the World ex-USA Index at 11.0%. The portfolio has a normalized P/E ratio of 14.5x, less than the 16.0x for the Index. These characteristics are consistent with the historical profile of the manager. The manager believes the portfolio is attractively valued compared to the market. The strategy is well diversified across sectors and geographies, a residual from bottom-up selection.



Through June 30, 2023

- The manager is a bottom-up stock picker; therefore the country specific exposure is a result of the companies held in the portfolio. The U.K. was the largest country exposure in the strategy at 17.7%, followed by Japan at 13.2%. Exposure to Emerging Markets was 14.2% and cash was 2.8% at quarter end.
- Over the quarter, positive stock selection in Materials and Health Care contributed the most to the Fund's relative outperformance. This was partially offset by stock selection in Industrials.
- The top 10 holdings represent 23.3% of the portfolio.

Baillie Gifford returned +1.91% in the quarter versus +3.03% for NYC Developed Growth Benchmark. For the fiscal year to date as of June 30, 2023, Baillie Gifford returned +18.00% versus +17.41% for the NYC Developed Growth Benchmark.

- ASML, a semiconductor equipment manufacturer, was the portfolio's largest holding at 7.5%.
- At quarter end, the portfolio had 12.2% invested in Emerging Markets.
- The top 10 holdings represent 46.1% of the portfolio.
- The portfolios European holdings Spotify and Ferrari and Latin American fintech business Nu Bank posted double digit year-on-year revenue growth. Against this was negative sentiment for two other European holdings, Zalando (online fashion) and Kering (luxury fashion), and Latin American ecommerce and fintech business MercadoLibre. With Zalando, the market has been concerned that a pivot to profitability might hamper growth. Kering's recent revenue was down in North America but resumed growth in Asia-Pacific due to the gradual recovery of the Chinese market. MercadoLibre while has outstanding potential, with excellent year-on-year sales progress and a huge fintech runway. However, the market finds it difficult to look through some of regional inflationary pressures, especially in Argentina.

Acadian performed above the index for the quarter, +0.87% versus +0.17% for the S&P EPAC Small Cap Index. For the fiscal year to date as of June 30, 2023, Acadian returned +15.44% versus +10.76% for the S&P EPAC Small Cap Index.

- The top allocation by country was Japan with 20.5%, followed by Australia (9.8%), and Germany (9.4%).
- The portfolio had a P/E of 9.7x while the benchmark had a P/E of 17.3x.
- At quarter end, the portfolio's emerging markets exposure was 10.9%.
- The portfolio held 987 stocks.



Through June 30, 2023

Algert outperformed for the quarter, -0.46% versus +0.58 for the MSCI EAFE Small Cap Index. For the fiscal year to date as of June 30, 2023, Algert returned +12.18% versus +10.18% for the MSCI EAFE Small Cap Index.

- Relative Value related exposures generated modestly positive returns for the quarter. Signal performance varied across regions, as the type signals, such as Book to Price (B/P) exhibited strong performance in Japan while negative performance in Europe. While the cheap, B/P valuation related signals outperformed in Japan, the higher quality, multi period valuation and mean reversion in longer term fundamentals insights generally underperformed. The quarter did mask some intra quarter dispersion, as April and June were strong months for Value, while May was a more challenging month as markets turned negative on fears of an economic slowdown.

- Quality exposures detracted from performance for the quarter. After a strong end to the first quarter, Quality related signal performance was fairly muted throughout the quarter. From a regional standpoint, all regions detracted from performance. Within Europe, margin related insights continued their strong performance during the quarter, while business model, life cycle and financing of growth signals underperformed. Despite the recent underperformance the macroeconomic environment remains favorable for Quality related insights.

- The portfolio held 226 stocks compared to MSCI EAFE Small Cap of 2,261 stocks.

Emerging Markets Equity Commentary

As of June 30, 2023, Emerging Markets Equity was \$428.9 million or represented 5.1% of the BERS Total Fund. Emerging Markets returned +1.55% for the quarter versus +0.90% for the MSCI Emerging Markets, Net Index.

Emerging Markets Equity Managers

Acadian returned +2.54% for the quarter versus +0.90% for the MSCI Emerging Markets, Net Index. For the fiscal year to date as of June 30, 2023, Acadian returned +5.09% versus +1.75% for the MSCI Emerging Markets, Net Index.

- The portfolio had a P/E of 8.4x, while the benchmark had a P/E of 13.6x.
- At quarter end, the portfolio held 593 stocks and the benchmark held 1,423.
- The top allocation by country was China with 33.1% followed by Taiwan (17.7%) and India (14.1%).



Through June 30, 2023

CONY GT EM BlackRock returned +0.86% versus +0.90% for the MSCI Emerging Markets, Net Index during the quarter. For the fiscal year to date as of June 30, 2023, CONY GT EM BlackRock returned +2.10% versus +1.75% for the MSCI Emerging Markets, Net Index.

JP Morgan returned -0.58% versus +0.90% for the MSCI Emerging Markets, Net Index during the quarter. For the fiscal year to date as of June 30, 2023, JP Morgan returned +4.24% versus +1.75% for the MSCI Emerging Markets, Net Index.

- In China, stock selection was a headwind to performance. Despite economic data starting to show signs of a more sustained recovery, as well as a pro-business stance by the government, the momentum witnessed at the start of the calendar year appeared to be weakening, evidenced by slower than expected recovery in household balance sheets. Consequently, sentiment towards more consumption exposed sectors remained weak and the portfolio's holdings in Wuliangye Yibin, Foshan Haitian and JD.com weighed on returns.
- Additionally, stock selection in India detracted from performance. Infosys underperformed as concerns that customer spending on new projects may be lower than expected.

Global Equity Managers

Morgan Stanley returned +11.59% versus +6.18% for the MSCI AC World Index, during the quarter. For the fiscal year to date as of June 30, 2023, Morgan Stanley outperformed returning +37.21% versus +16.53% for the MSCI AC World Index.

- Stock selection in industrials, information technology and communication services were the greatest overall contributors to the relative performance of the portfolio. Top individual contributors included global mobility and food delivery platform Uber Technologies, social network Meta Platforms, cloud software platform ServiceNow, Canadian ecommerce solution Shopify and creative software developer Adobe.
- Sector overweight allocation to financials were the greatest overall detractors from relative performance during the period. Top individual detractors included Latin American ecommerce platform MercadoLibre, Chinese consumer super app Meituan, entertainment leader Walt Disney, Chinese online travel agent Trip.com and payments solution provider Block Inc.

Fiera returned +5.55% versus +6.83% for the MSCI World Index, during the quarter. For the fiscal year to date as of June 30, 2023, Fiera returned +20.04% versus +18.51% for the MSCI World Index.

- Among the largest individual contributors in the portfolio over the quarter were Oracle (and Microsoft (Oracle outperformed significantly as the company is emerging as a strong player in AI/cloud computing behind the big three (Microsoft, and AWS) Oracle's growth has been helped by running the software for various AI startups Additionally, the



Through June 30, 2023

stock reacted positively to their earnings report which included a beat and raised guidance Microsoft also outperformed helped by AI enthusiasm and a strong earnings report which included better than expected results and raised guidance amidst a challenging macro spending environment.

- Among the relative detractors over the quarter included names such as NVIDIA, Apple, and Amazon, all companies not held in the Global Equity Strategy As for existing holdings that detracted, this included MSCI and Mettler Toledo MSCI reported a slight miss on quarterly revenues with the main negative surprise being a continued slowdown in their ESG segment Management pointed to US political and EU regulatory uncertainties as the main driver, and the market reacted negatively given the company's premium valuation As for Mettler Toledo, the stock pulled back driven by industry wide concerns of a slowdown in biopharmaceutical spending as well as a normalization in demand post pandemic.

Xponance returned +2.76% versus +2.38% for the MSCI ACWI Ex USA IMI Net, during the quarter. For the fiscal year to date as of June 30, 2023, Xponance returned +14.82% versus +12.47% for the MSCI ACWI Ex USA IMI Net.

- The second quarter's top 5 contributors to strategy performance were Tencent, YDUQS, Dina Polska, Disco Corp, and Macrotech Dev. The top detractors of strategy performance during the second quarter were Alibaba, Baidu, Proya Cosmetics, Bosideng Int., and China Tourism.

- The second quarter's top 5 country contributors were United Kingdom, Germany, Korea, France, and Brazil.

Fixed Income – Structured Manager Composite Commentary

As of June 30, 2023, the Total Structured Portfolio was \$1.1 Billion or 12.4% of the BERS Total Fund. Structured Fixed Income returned -0.79% in the second quarter versus -0.79% for the benchmark. For the fiscal year to date as of June 30, 2023, Structured Fixed Income returned -0.67% versus -0.87% for the benchmark.

Fixed Income – Structured Manager Composite Managers

BlackRock (mortgages) returned -0.56% in the quarter versus the NYC Custom Mortgage Benchmark return of -0.64%. For the fiscal year to date as of June 30, 2023, BlackRock (mortgages) returned -1.55% versus -1.52% for the NYC Custom Mortgage Benchmark.

- In securitized assets, where permitted by client guidelines, it broadly maintains 15-20bps of spread duration (in the lower end of the historical average) in private label AAA/AA CMBS. This position continues to be focused in the SASB subsector, with holdings at the top of the capital stack and moderate spread duration of ~4 years, leaving portfolios with capacity to add should CMBS spreads widen sufficiently from current levels.



Through June 30, 2023

- In line with this narrative on the technical, it is relatively more constructive in the lower part of the coupon stack, especially 3.0s-3.5s. It continues to be less constructive on those slightly higher, such as 4.0s-4.5s; 4.0s and 4.5s avoid supply from both origination and FDIC sales and have a nice blend of reasonably wide nominal spreads as well as lower prepayment risk. However, valuations of these have already reflected their advanced positions, prompting us to view these as the most unattractive portion of the coupon stack. As such, throughout the quarter, it has continued to maintain a down in coupon preference via short UM 4.5/3.5 and in other managed portfolios that permit options, legged into mortgage basis positions in 3.0s and 3.5s. In G2/FN exposure, it continues to hold the long in G2/FN 4.5s; there is some value in GNMA given the widening in valuations that took place during March and continued demand from overseas investors/reinvestment of bank paydowns should add as a tailwind.

T. Rowe Price returned -0.30% in the quarter versus the Bloomberg U.S. Corporate Investment Grade Index return of -0.29%. For the fiscal year to date as of June 30, 2023, T. Rowe Price returned +1.51% versus +1.55% for the Bloomberg U.S. Corporate Investment Grade Index.

- Security selection in the insurance sector weighed on relative results, although an overweight allocation to the sector made up for some relative losses. Holdings of life insurance providers, including Jackson Financial and CNO Financial, underperformed amid concerns about potential losses stemming from commercial real estate exposure.

- In the second quarter, credit selection within the real estate investment trust (REIT) sector detracted from relative performance, dragged lower, in part, by self-storage names. However, an overweight allocation to the sector made up for some relative losses, as health care-related REITs benefited from subsiding COVID-19 risks and post-pandemic normalization.

SSgA LI Treasury (governments) returned -1.80% in the quarter versus the -1.94% return for the NYC - Treasury Agency Plus Five. For the fiscal year to date as of June 30, 2023, SSgA (governments) returned -5.05% versus -4.60% for the NYC - Treasury Agency Plus Five.

- In the second quarter of 2023, bond yields which began rising towards the end of April continued to remain elevated in May and June. The US 10yr yields rose 37 bp from 3.47% to 3.84%. The 2yr segment of the yield curve saw close to a 1% increase (87 bp) driven by the debt ceiling skimmer early in the quarter and broad resilient growth. While the US Fed is now expected to have reached its cruising 'rate hike altitude', the narrative from the US Fed still read 'cautious' as US labor data continued to remain tight. Resilience was the term for US growth in 2Q23. On the credit front, US investment grade posted mildly negative returns but outperformed treasuries through the quarter. High Yield posted positive returns and lapped up investors looking for the additional yield that fixed income provided through this quarter.



Through June 30, 2023

SSgA 1-10 Yr. Treasury/ Agency returned -1.14% in the quarter versus the -1.11% return for the USBIG Treasury/ Agency 1- 10 Yr. Index. For the fiscal year to date as of June 30, 2023, the SSgA 1-10 Yr. Treasury Index returned -1.00% versus the -1.08% for the USBIG Treasury/Agency 1-10Yr. Index.

SSgA 1 -3 Yr. Treasury Index returned -0.56% in the quarter, matching the FTSE USBIG Treasury 1 -3 Yr. Index return of -0.56%. For the fiscal year to date as of June 30, 2023, the SSgA 1-3 Yr. Treasury Index returned +0.25%, above the FTSE USBIG Treasury 1 -3 Yr. Index return of +0.16%.

SSgA LT Treasury 10Y Plus returned -2.33% in the quarter versus the FTSE Treasury 10+ return of -2.30%. For the fiscal year to date as of June 30, 2023, the SSgA LT Treasury 10Y Plus returned -7.06% above the FTSE Treasury 10+ return of -7.50%.

Enhanced Yield Fixed Income & Bank Loans Commentary

As of June 30, 2023, Enhanced Yield Fixed Income was \$759.0 million or 8.93% of the BERS Total Fund.

Mackay Shields returned +1.22% in the quarter versus +1.75% for Bloomberg U.S. High Yield – 2% Issuer Cap Index. For the fiscal year to date as of June 30, 2023, Mackay Shields returned +9.10% versus +9.07% for the Bloomberg US High Yield – 2% Issuer Cap Index.

- Gulfport Energy drove returns in the Exploration & Production sector. Schaeffler Group and Real Hero outperformed in the Auto Parts & Equipment industry. Within Healthcare, an overweight to Owens & Minor aided in Health Services, but was mitigated by an underweight to Bausch Health in Pharmaceuticals. The portfolio's underweight to CCCs and distressed credits was the largest contributor to underperformance over the quarter.
- Specialty Retail detracted from returns as the portfolio did not own stressed issuers Carvana and QVC, which recovered sharply. CWT Travel was negative for returns in the Recreation & Travel industry.

Nomura returned +1.78% in the quarter versus +1.75% for Bloomberg U.S. High Yield – 2% Issuer Cap Index. For the fiscal year to date as of June 30, 2023, Nomura returned +10.49% versus +9.07% for the Bloomberg US High Yield – 2% Issuer Cap Index.

- In the second quarter of 2023, the underweight to BBs and overweight to Bs helped performance as lower credit quality issuers outperformed, but the exposure to out-of-benchmark BBBs was a drag on relative returns. The duration posture has been modestly overweighting all year, which helped performance until early May, but was a drag in the second half of 2Q23. Across the credit spectrum, performance was supported by strong security selection. The top sector contributors to positive relative performance in Q2 included Recreation & Travel, Theaters & Entertainment, and Banking. In Recreation & Travel, Carnival Cruise Lines was an important contributor to the portfolio's performance, as bookings and operating earnings have rebounded sharply YTD from the Covid-related disruption in recent years. Banking benefited



Through June 30, 2023

from avoiding First Republic Bank. In Theaters & Entertainment, AMC benefitted from box office improvements and positive earnings news.

- The key sector detractors from the portfolio's relative performance in Q2 included Specialty Retail, Support Services, and Investments & Miscellaneous Financial Services. In Specialty Retail, the avoidance of Carvana was a negative contributor, with the troubled company's bond prices bouncing off distressed levels in this year's market rally. In Support Services, Staples bonds gave back gains following a decent Q1 earnings report as the company guided to a slower second quarter. In Financial Services, ATM maker Diebold faced liquidity issues and filed for Chapter 11 bankruptcy in early June.

TIPS, ETI, Cash Commentary

As of June 30, 2023, Fixed Income – TIPS, ETI and Cash was \$343.38 million or 4.04% of the NYBERS Total Fund.

Fixed Income – TIPS Manager

SSgA (TIPS) returned -1.44% in the quarter, below the -1.42% return for the Bloomberg Global Inflation Linked Index. For the fiscal year to date as of June 30, 2023, SSgA (TIPS) returned -1.43% versus the -1.40% return for the Bloomberg Global Inflation Linked Index.

Fixed Income – Core Manager

Pugh returned -0.54% in the quarter, versus the -0.84% return for Bloomberg U.S. Aggregate Index. For the fiscal year to date as of June 30, 2023, Pugh returned -0.11% versus the -0.94% return for the Bloomberg U.S. Aggregate.

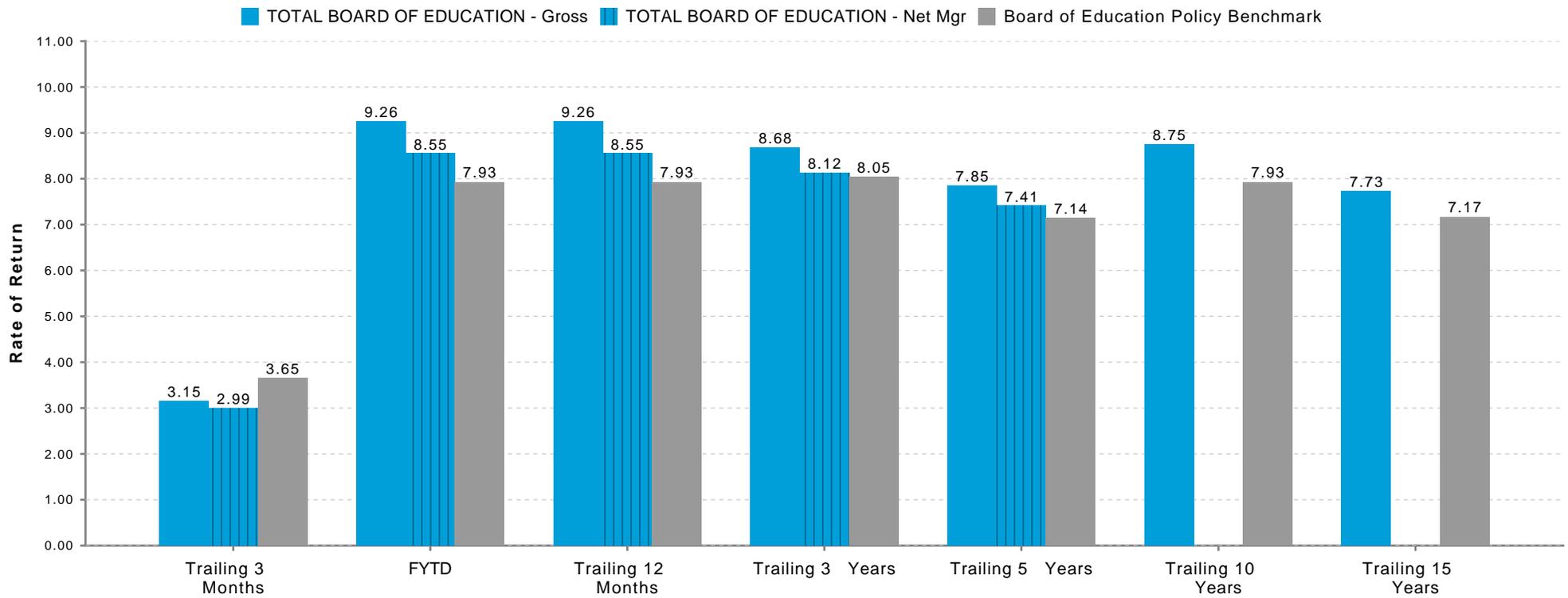
- Credit positioning was the largest contributor to performance with strong selection due to a focus on Industrials and lower quality profiles, which outperformed. Selection within ABS and CMBS added to performance due to a focus on lower quality profiles in ABS and new issue opportunities within CMBS. Overweight positioning to ABS and MBS was beneficial as all structured sectors generated positive excess returns.
- Duration positioning added to performance due to an underweight to shorter key rates, which increased significantly. At quarter end, the portfolio duration was 6.35 versus the Index duration of 6.25.



Market Value (Billions)

TOTAL BOARD OF EDUCATION

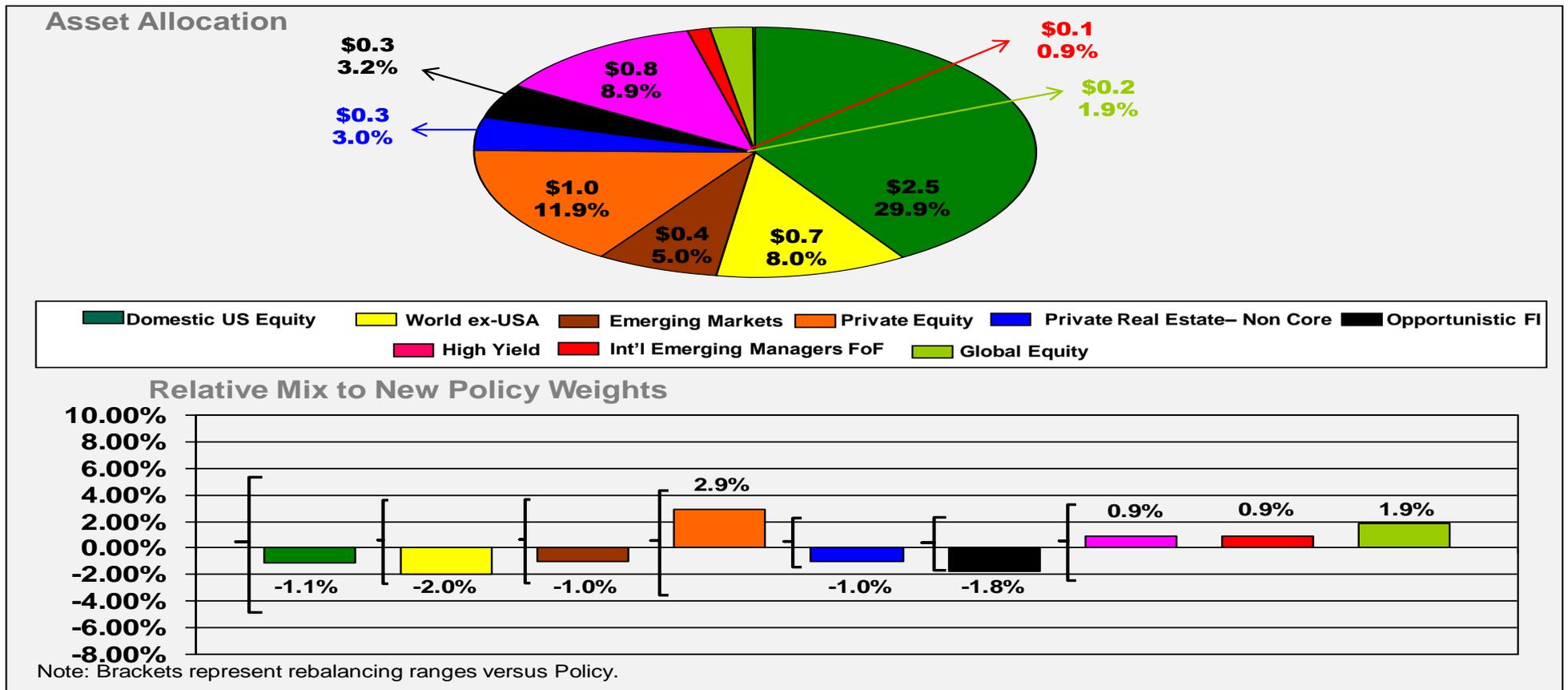
\$8.5



	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL BOARD OF EDUCATION	10.4	10.8	7.8	10.8	8.8	8.8

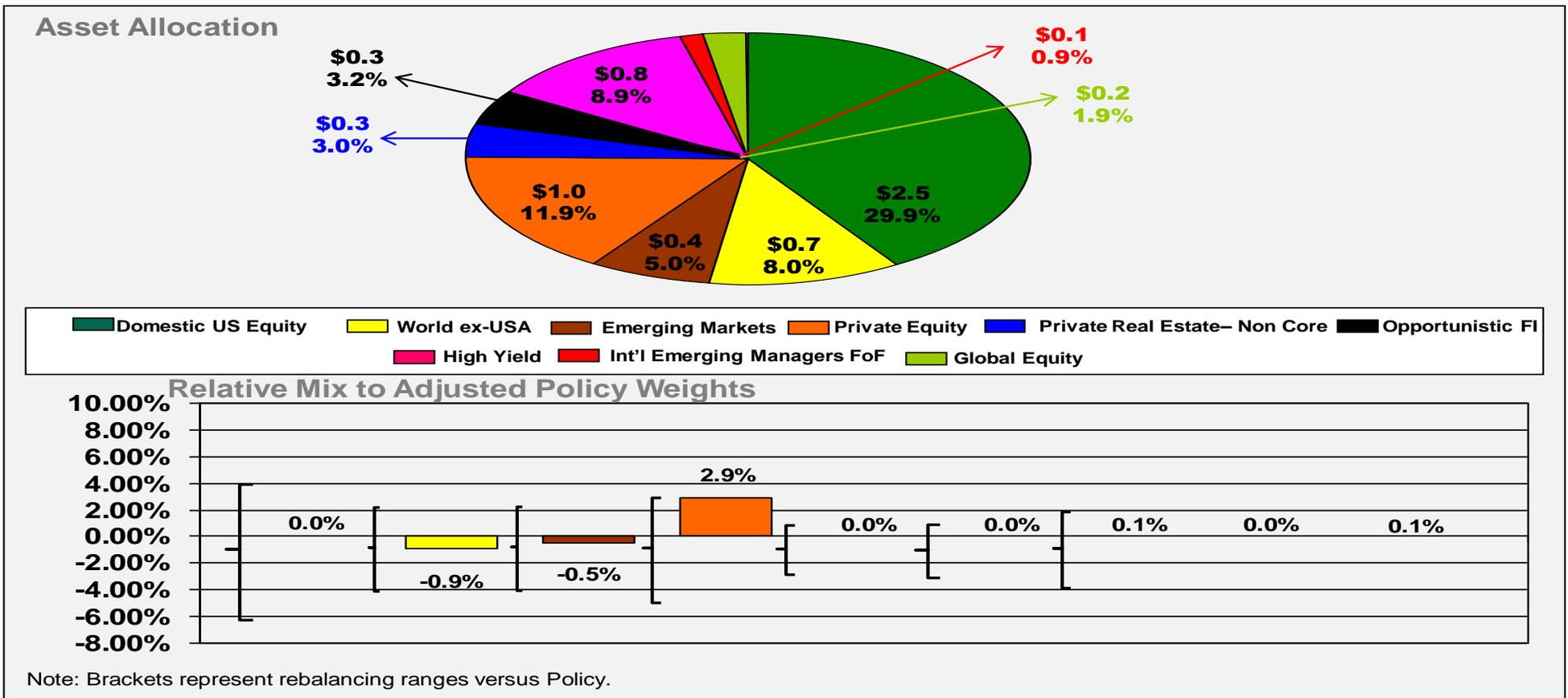


Portfolio Asset Allocation – Growth



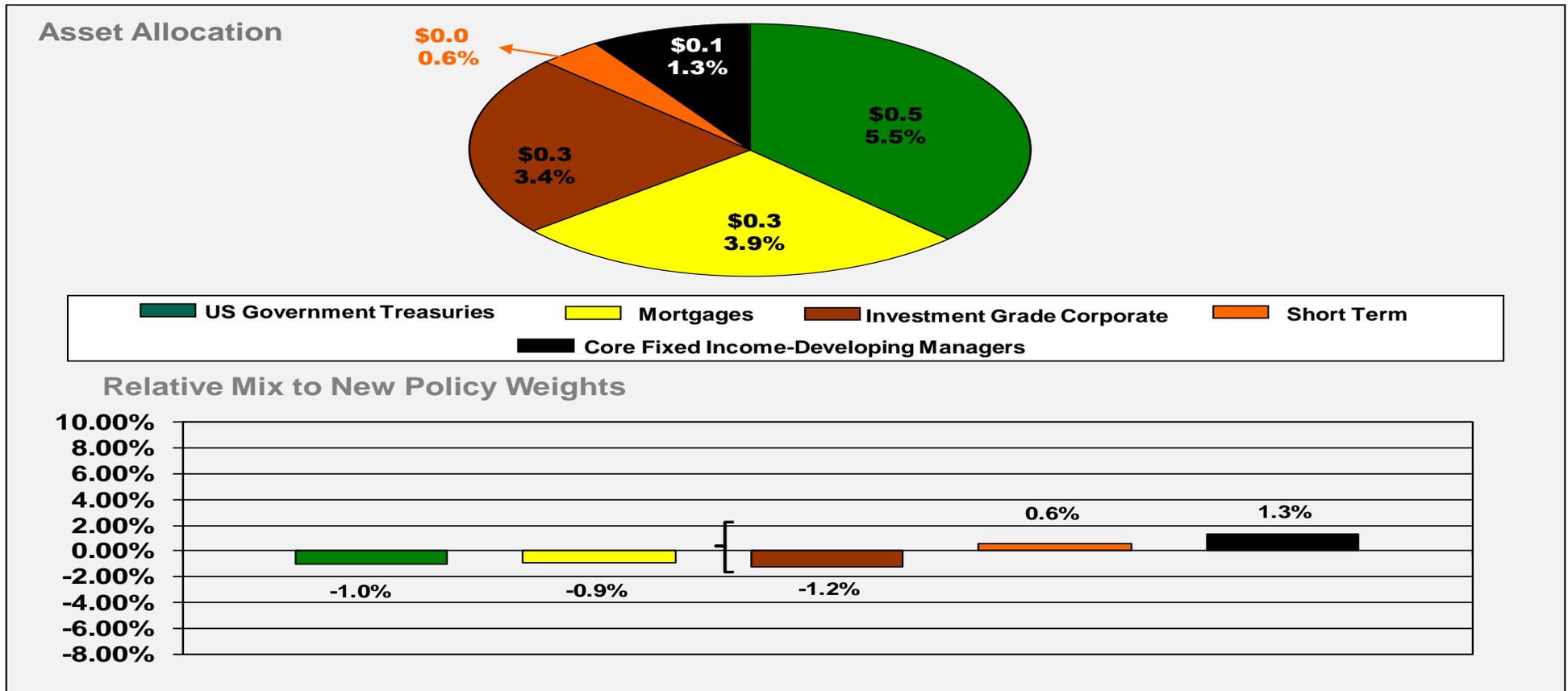


Portfolio Asset Allocation – Growth

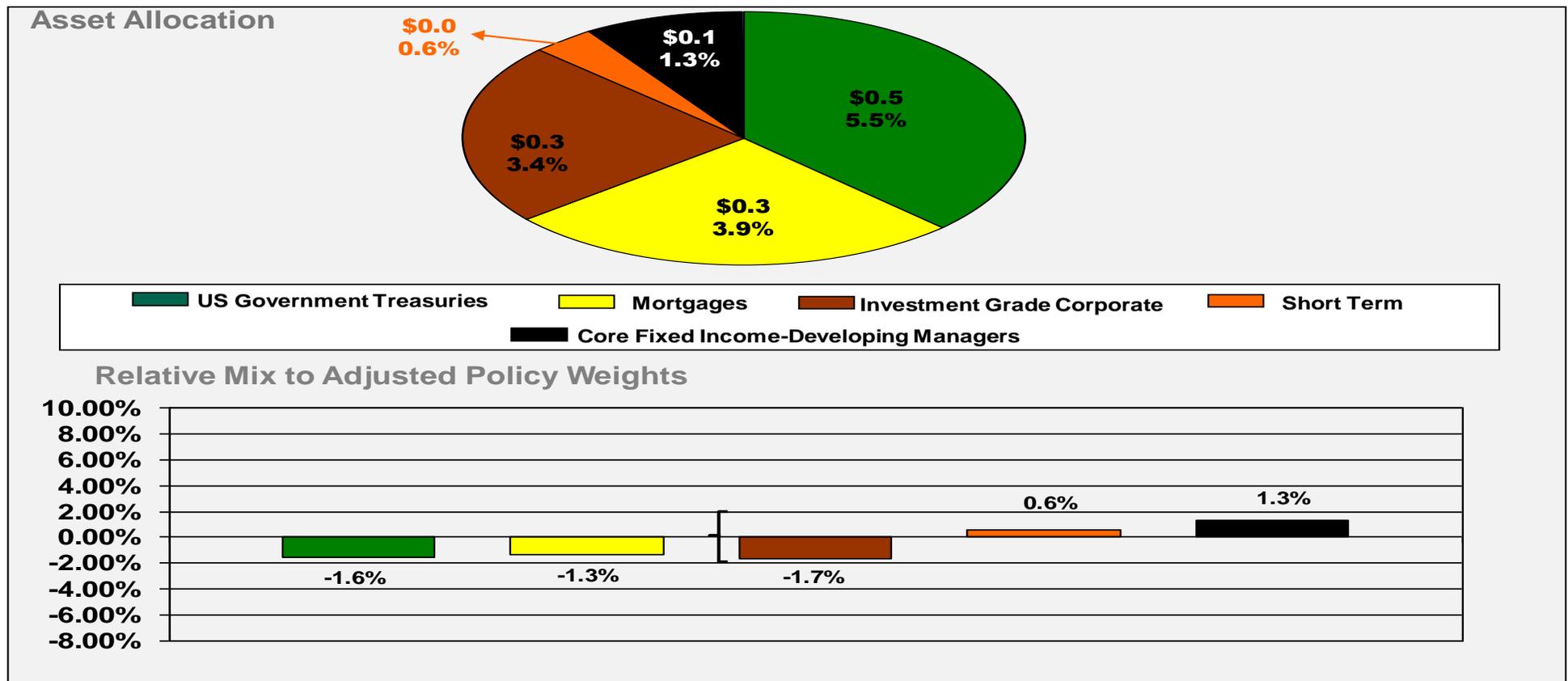




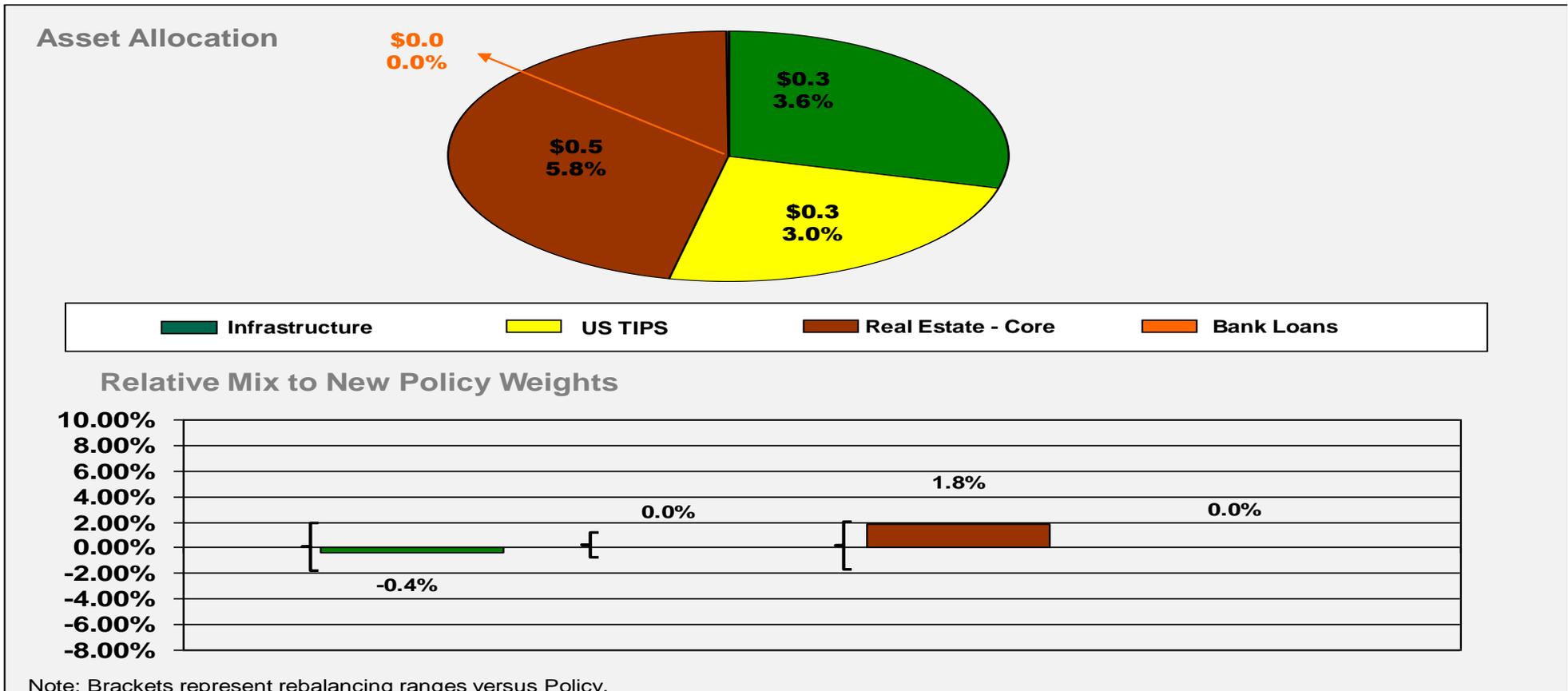
Portfolio Asset Allocation – Deflation Protection



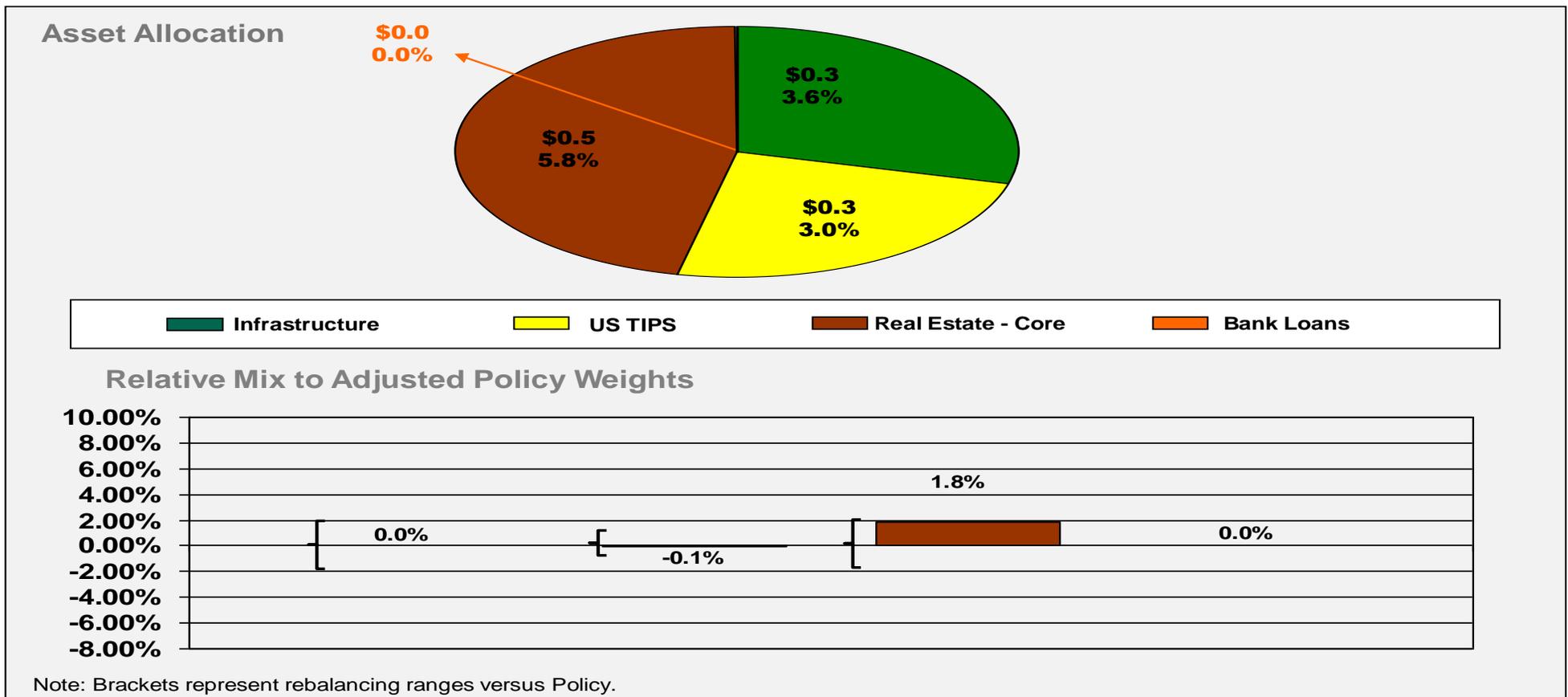
Portfolio Asset Allocation – Deflation Protection

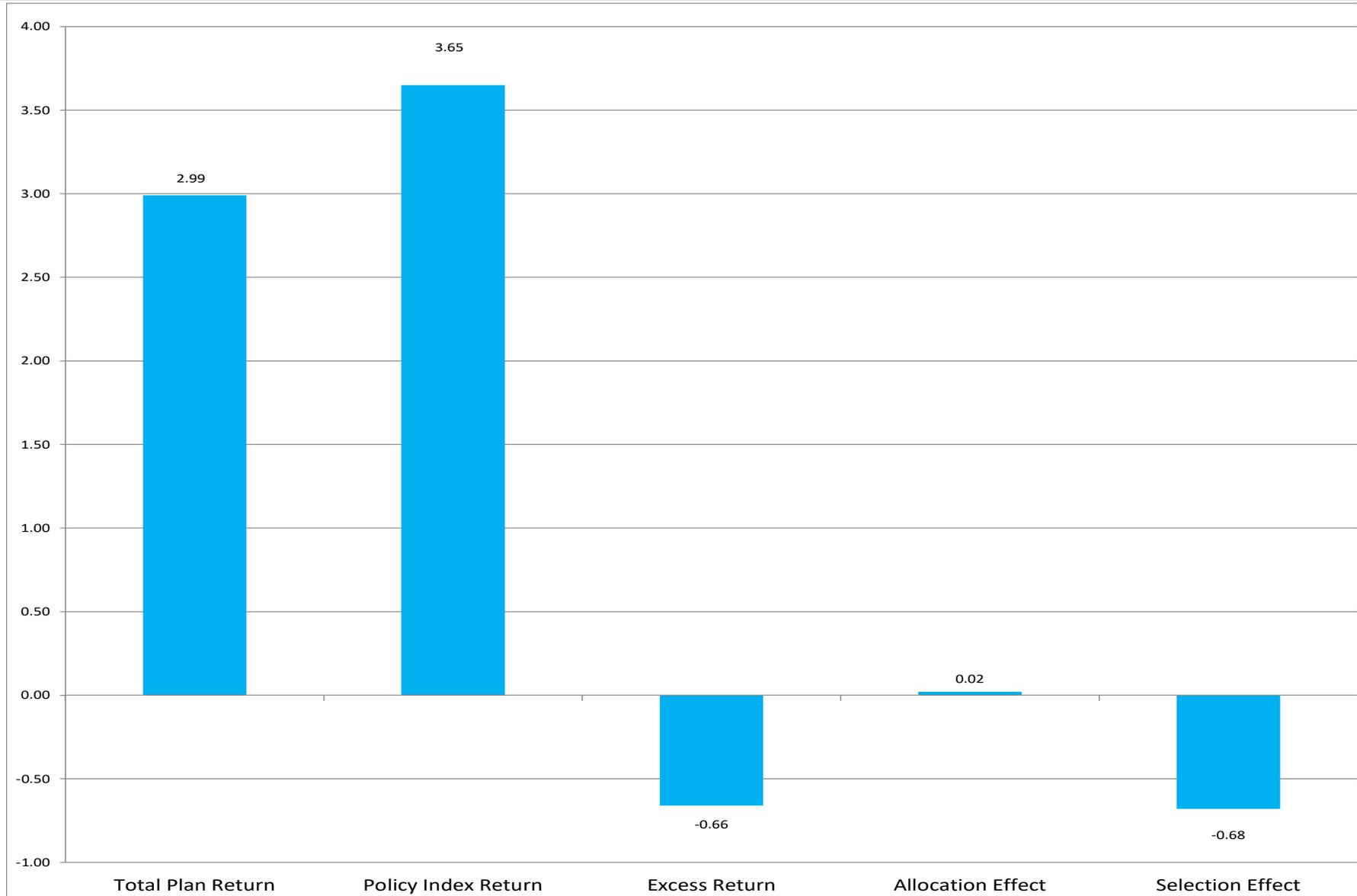


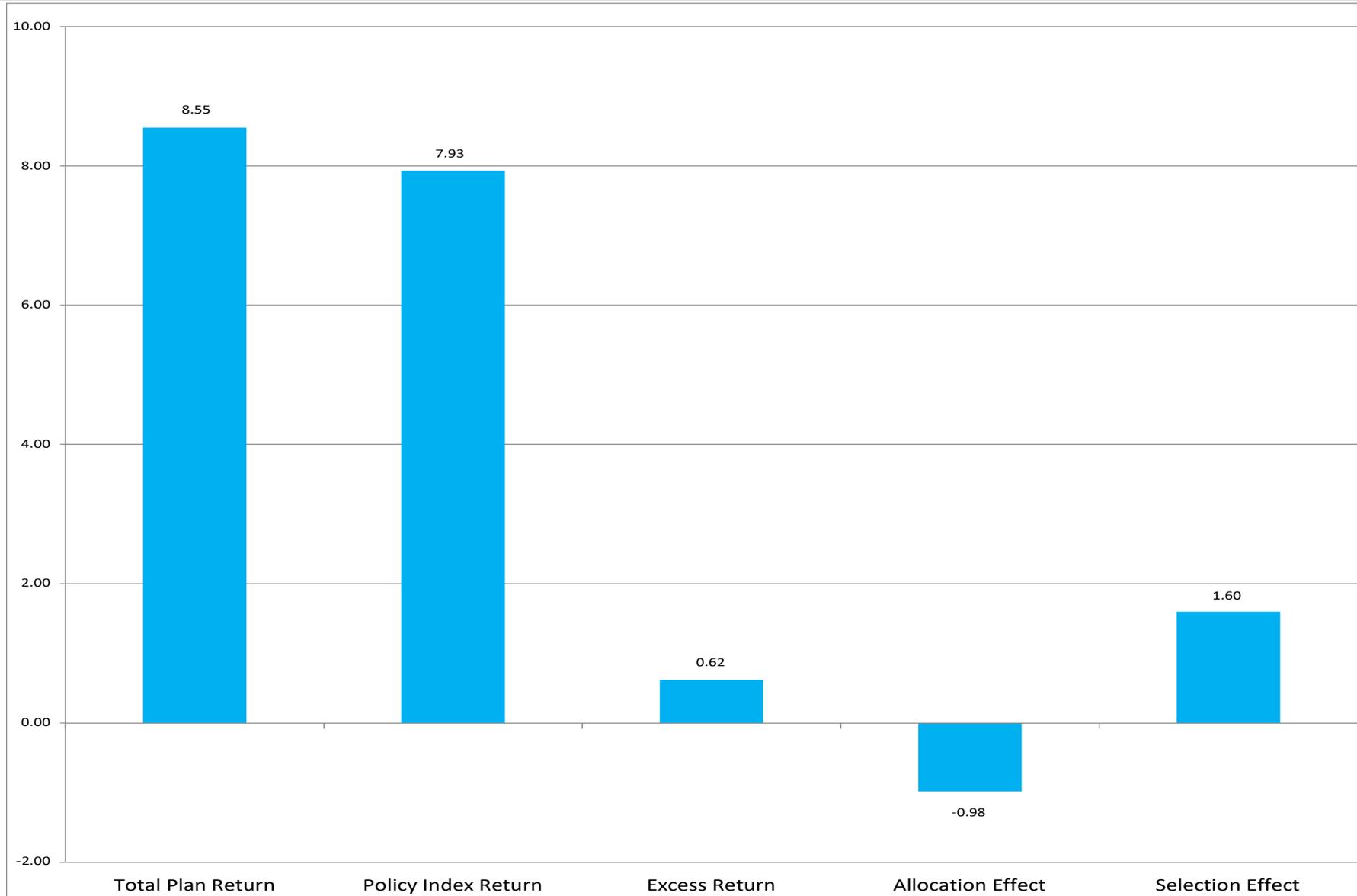
Portfolio Asset Allocation – Inflation Protection

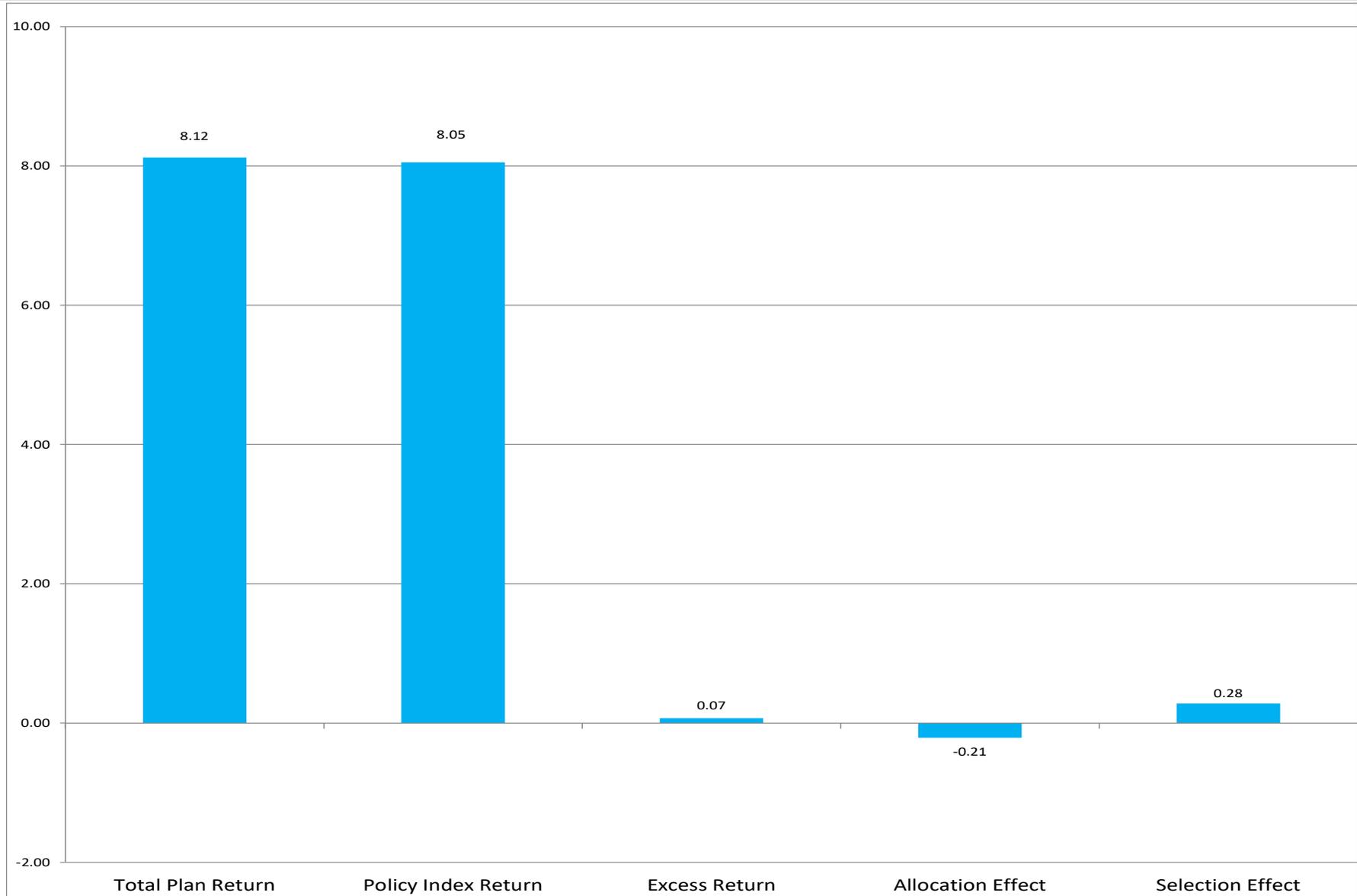


Portfolio Asset Allocation – Inflation Protection











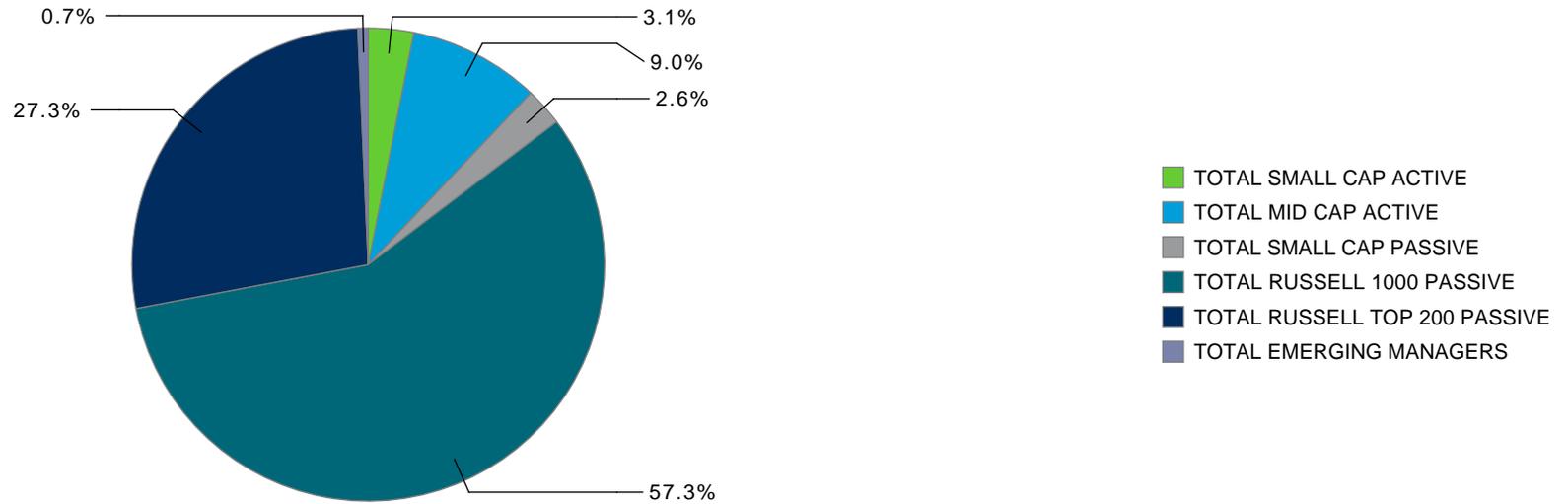
Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL BOARD OF EDUCATION	0.02	-0.98	-0.21	Board of Education Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.09	-0.23	-0.11	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	0.00	-0.08	0.00	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	0.00	-0.01	0.00	MSCI AC WORLD (Daily Const)
TOTAL EMERGING MARKETS	0.01	-0.02	0.01	MSCI EMERGING MARKETS
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	MSCI ACWI ex USA IMI Net
TOTAL PRIVATE EQUITY	0.11	-0.34	-0.06	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.13	-0.47	-0.11	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE NON-CORE	0.00	-0.01	0.01	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.01	0.03	-0.09	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.01	0.04	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.05	0.11	0.07	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.01	0.03	0.01	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	0.06	0.08	0.19	NYC Custom IGC Benchmark
TOTAL MORTGAGE	0.05	0.05	0.00	NYC Custom Mortgage Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.06	-0.13	-0.17	Bloomberg U.S. Aggregate
TOTAL ETI	0.00	0.00	0.00	BERS Custom Benchmark (No Cash)
TOTAL HIGH YIELD	0.00	-0.03	0.11	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	-0.02	-0.03	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.02	-0.05	-0.16	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL BOARD OF EDUCATION	-0.68	1.60	0.28	Board of Education Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.11	-0.13	-0.22	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	0.01	0.23	-0.17	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	0.04	0.17	-0.05	MSCI AC WORLD (Daily Const)
TOTAL EMERGING MARKETS	0.03	0.15	0.00	MSCI EMERGING MARKETS
TOTAL INTERNATIONAL FOF	0.00	0.02	0.01	MSCI ACWI ex USA IMI Net
TOTAL PRIVATE EQUITY	-0.65	0.45	0.25	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	0.00	0.63	0.20	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE NON-CORE	0.06	0.25	0.10	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.01	0.01	0.07	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.00	-0.01	0.00	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	0.00	-0.01	-0.01	NYC Custom IGC Benchmark
TOTAL MORTGAGE	0.00	-0.01	0.00	NYC Custom Mortgage Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.01	0.01	Bloomberg U.S. Aggregate
TOTAL ETI	0.00	0.00	0.00	BERS Custom Benchmark (No Cash)
TOTAL HIGH YIELD	-0.02	0.06	0.08	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	0.00	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	0.00	0.00	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	-0.06	-0.24	0.01	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

Total Domestic Equity Asset Allocations: June 30, 2023



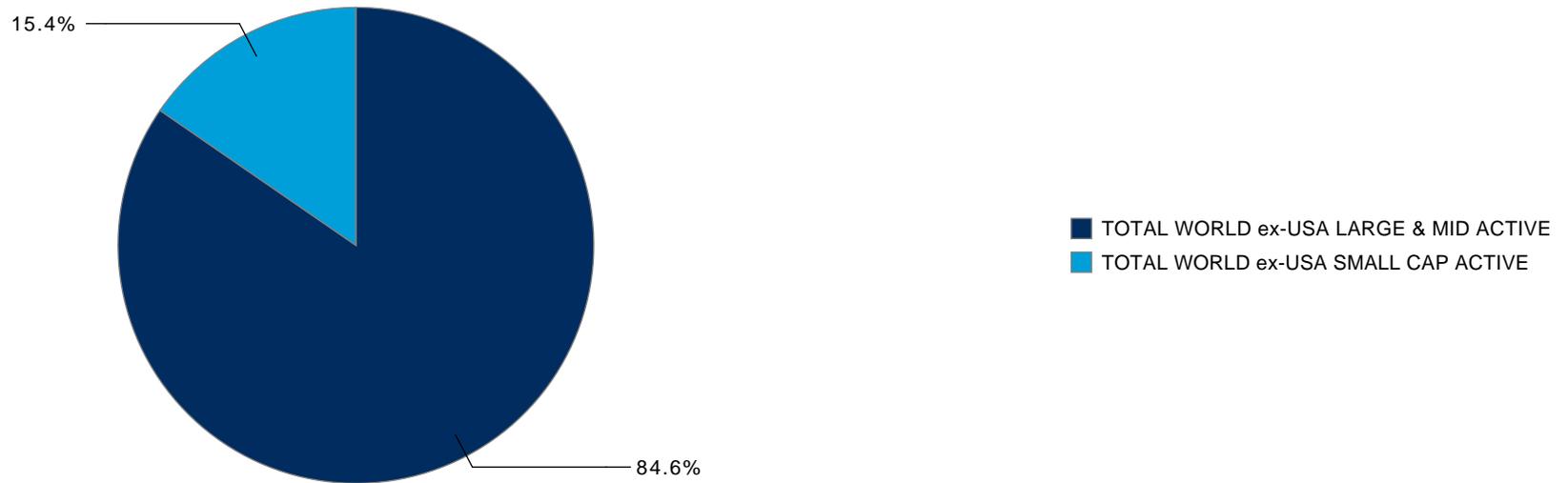
	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$2.5	29.9



	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL SMALL CAP ACTIVE	2.9	3.1	0.2	6.7	5.2	1.5
TOTAL MID CAP ACTIVE	10.0	9.0	(1.0)	2.1	4.8	(2.7)
TOTAL SMALL CAP PASSIVE	2.9	2.6	(0.3)	3.1	5.2	(2.1)
TOTAL RUSSELL 1000 PASSIVE	55.0	57.4	2.4	8.5	8.6	(0.0)
TOTAL RUSSELL TOP 200 PASSIVE	28.7	27.3	(1.4)	9.6	9.9	(0.3)
TOTAL EMERGING MANAGERS	0.5	0.7	0.2	2.8	5.2	(2.4)



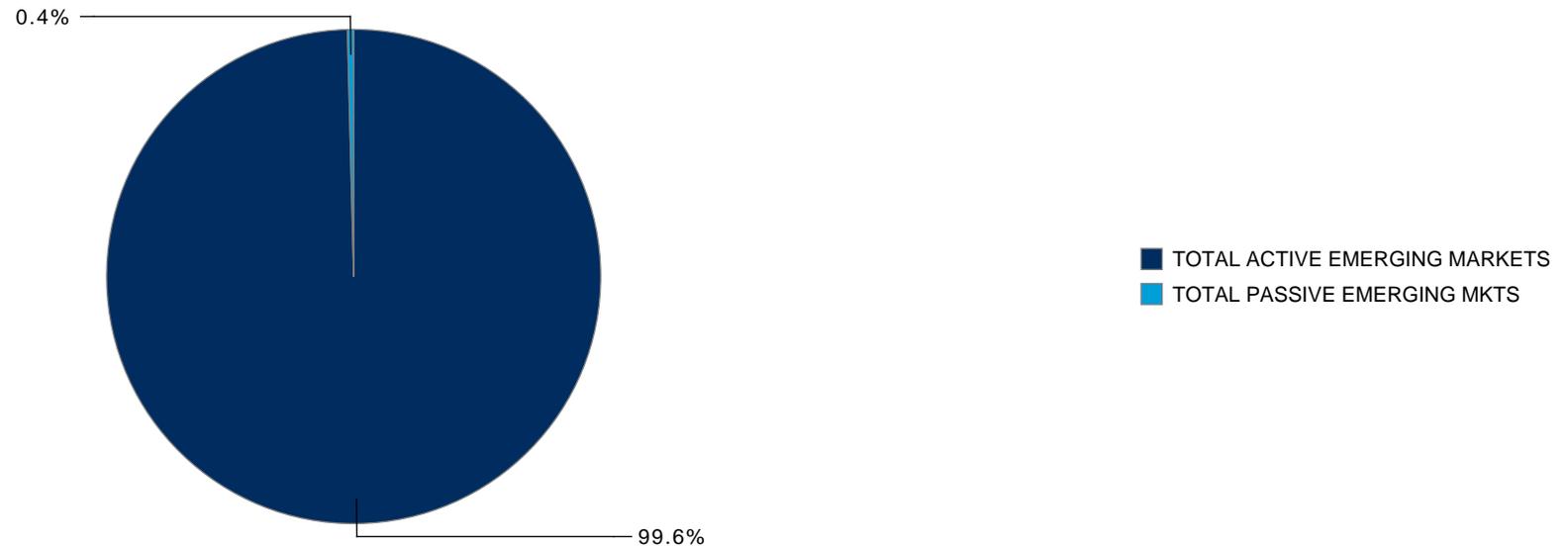
	<u>Market Value (Millions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$683.8	8.0



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	84.56	3.26	3.03	0.23
TOTAL WORLD ex-USA SMALL CAP ACTIVE	15.44	0.67	0.17	0.50
TOTAL WORLD ex-USA	100.00	2.87	2.67	0.20



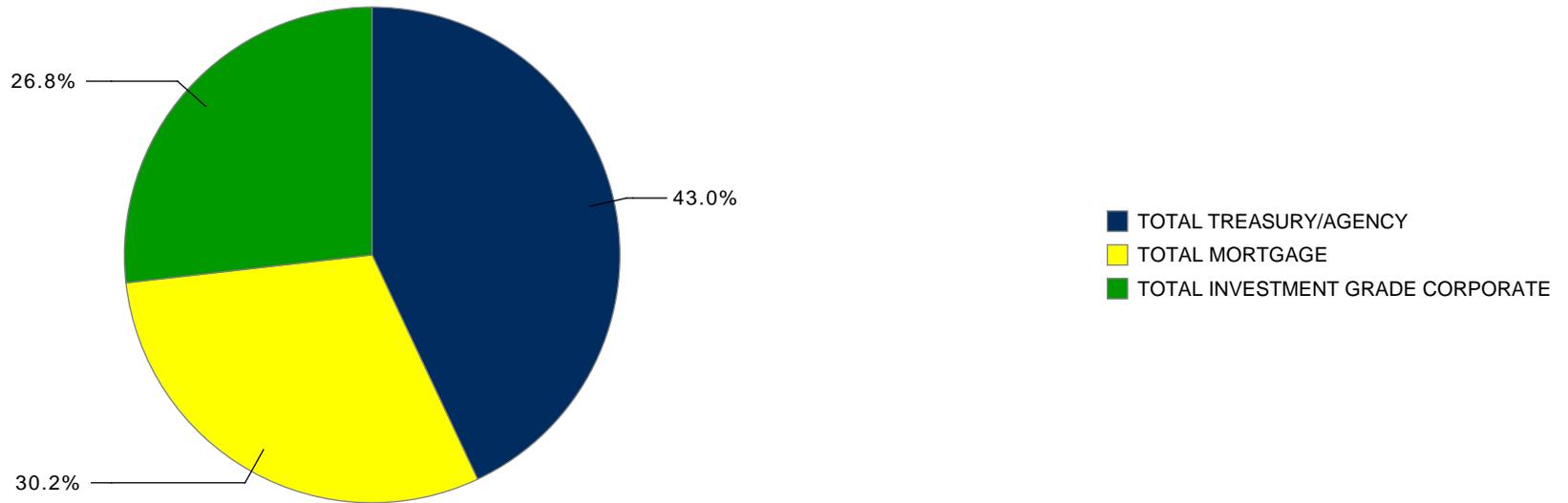
	<u>Market Value (Millions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$428.9	5.0



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	99.62	1.56	0.90	0.66
TOTAL PASSIVE EMERGING MARKETS	0.38	0.86	0.90	(0.03)
TOTAL EMERGING MARKETS	100.00	1.55	0.90	0.66



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED + ETI	\$1.1	12.9



	<u>Policy Weight</u>	<u>Asset Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	40.81	42.99	2.18	(1.19)	(1.27)	0.08
TOTAL MORTGAGE	29.94	30.23	0.29	(0.64)	(0.64)	0.01
TOTAL INVESTMENT GRADE CORPORATE	29.25	26.79	(2.46)	(0.35)	(0.29)	(0.06)



Through June 30, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$1 Billion
Cumulative Periods Ending : June 30, 2023



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	4.60	9.71	17.88	11.90	4.36	12.06	9.67	9.51	9.96	9.29
25th	3.36	7.98	13.94	9.22	2.48	10.52	8.47	8.07	8.97	8.50
50th	2.79	7.11	12.44	7.92	0.73	8.96	7.29	7.25	8.55	7.97
75th	2.35	5.43	9.69	6.09	-0.51	8.00	6.28	6.49	7.66	7.29
95th	0.44	3.61	6.84	2.68	-5.02	0.20	1.45	2.92	3.41	4.26
No. Of Obs	80	78	77	77	75	75	72	66	66	66
B Total System - BOE	3.15 (33)	8.11 (21)	13.77 (28)	9.26 (22)	-0.01 (66)	8.68 (59)	8.00 (37)	7.85 (32)	9.31 (16)	8.75 (22)
★ Board of Ed Policy Ben	3.65 (17)	8.85 (14)	14.14 (21)	7.93 (48)	-0.52 (75)	8.05 (72)	7.10 (59)	7.14 (54)	8.22 (59)	7.93 (53)
■ Public Mkt Equiv 25	4.55 (5)	11.33 (1)	21.03 (1)	13.93 (1)	-0.97 (76)	8.08 (72)	7.09 (59)	7.03 (60)	8.25 (56)	7.86 (56)
◆ Public Mkt Equiv 35	3.95 (8)	10.17 (3)	18.52 (2)	11.90 (5)	-1.50 (83)	6.58 (85)	6.23 (76)	6.43 (76)	7.39 (81)	7.21 (79)

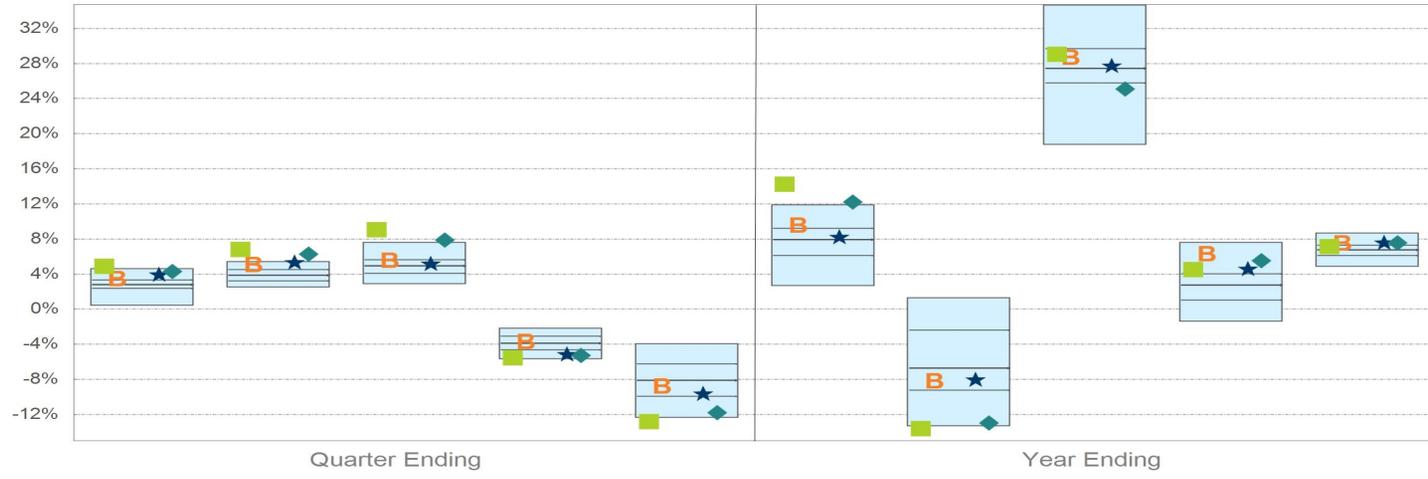
Wilshire Trust Universe Comparison Service® (TUCS®)



Through June 30, 2023



**City of New York
Performance Comparison**
Total Returns of Master Trusts - Public : Plans > \$1 Billion
Consecutive Time Periods: June 30, 2023



Percentile Rankings	Jun 23	Mar 23	Dec 22	Sep 22	Jun 22	Jun 23	Jun 22	Jun 21	Jun 20	Jun 19
5th	4.60	5.43	7.61	-2.17	-3.96	11.90	1.32	34.66	7.61	8.70
25th	3.36	4.50	5.63	-3.06	-6.25	9.22	-2.36	29.67	4.05	7.27
50th	2.79	3.86	4.93	-3.86	-8.13	7.92	-6.71	27.46	2.77	6.77
75th	2.35	3.21	4.08	-4.64	-9.92	6.09	-9.21	25.77	1.02	6.13
95th	0.44	2.54	2.93	-5.65	-12.35	2.68	-13.27	18.80	-1.37	4.90
No. Of Obs	80	78	79	80	79	77	78	80	75	69
B Total System - BOE	3.15 (33)	4.80 (16)	5.24 (36)	-3.97 (52)	-9.06 (64)	9.26 (22)	-8.49 (65)	28.38 (40)	5.99 (11)	7.24 (27)
★ Board of Ed Policy Ben	3.65 (17)	5.02 (8)	4.86 (52)	-5.44 (92)	-9.90 (73)	7.93 (48)	-8.30 (63)	27.47 (48)	4.29 (23)	7.30 (23)
■ Public Mkt Equiv 25	4.55 (5)	6.48 (1)	8.71 (1)	-5.87 (95)	-13.15 (96)	13.93 (1)	-13.92 (95)	28.74 (36)	4.17 (23)	6.81 (45)
◆ Public Mkt Equiv 35	3.95 (8)	5.98 (1)	7.58 (5)	-5.59 (93)	-12.10 (92)	11.90 (5)	-13.30 (95)	24.77 (82)	5.21 (14)	7.25 (25)

Wilshire Trust Universe Comparison Service® (TUCS®)

Through June 30, 2023



**BOARD OF EDUCATION RETIREMENT SYSTEM
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022**

INVESTMENT STYLE (EQUITIES)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total US Equities	2,743.87	2,384.57	-	8.69	1,232.10	4.49	3,616.67	13.18
Small Cap Active:								
Small Cap Growth	91.29	1,450.87	-	158.94	1,219.47	133.59	2,670.34	292.53
Small Cap Value	91.29	1,450.87	-	158.94	1,219.47	133.59	2,670.34	292.53
Small Cap Core	-	-	-	-	-	-	-	-
Small Cap Fundamental Index	-	-	-	-	-	-	-	-
Mid Cap Active:								
Mid Cap Growth	252.20	764.29	-	30.31	-	-	764.29	30.31
Mid Cap Value	-	-	-	-	-	-	-	-
Mid Cap Core	252.20	764.29	-	30.31	-	-	764.29	30.31
Other Active:								
Russell 1000 Fundamental	17.06	97.07	-	56.91	12.63	7.40	109.70	64.31
Legato (Emerging Manager- Equity)	17.06	97.07	-	56.91	12.63	7.40	109.70	64.31
U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total US Active Equities	360.54	2,312.23	-	64.13	1,232.10	34.17	3,544.33	98.31
Small Cap Passive:								
Small Cap Passive	82.54	2.93	-	0.35	-	-	2.93	0.35
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	2,300.79	69.41	-	0.30	-	-	69.41	0.30
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	1,605.14	32.16	-	0.20	-	-	32.16	0.20
Passive Russell 3000	-	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	695.65	37.24	-	0.54	-	-	37.24	0.54
Total US Passive Equities	2,383.33	72.33	-	0.30	-	-	72.33	0.30
Total International Equities	1,331.37	4,267.11	-	32.05	-	-	4,267.11	32.05
Global Equity	165.92	885.13	-	53.35	-	-	885.13	53.35
Active Total Global Equities	165.92	885.13	-	53.35	-	-	885.13	53.35
Active Total World Ex USA:								
World Ex-USA Large & Mid Developed Growth Active	788.71	1,955.42	-	24.79	-	-	1,955.42	24.79
World Ex-USA Large & Mid Developed Value Active	304.04	772.77	-	25.42	-	-	772.77	25.42
World Ex-USA Developed Small Cap Active	345.41	724.59	-	20.98	-	-	724.59	20.98
Total World Ex USA	139.27	458.06	-	32.89	-	-	458.06	32.89
NON-U.S. Activist	0.00	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	462.25	2,051.15	-	44.37	-	-	2,051.15	44.37
International Fund of Funds	78.57	260.03	-	33.09	-	-	260.03	33.09
Total Active International Equities	1,329.54	4,266.60	-	32.09	-	-	4,266.60	32.09
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	1.84	0.51	-	2.77	-	-	0.51	2.77
World Ex-USA Large & Mid Cap Passive	-	-	-	-	-	-	-	-
Passive Global	-	-	-	-	-	-	-	-
Passive Emerging Markets	1.84	0.51	-	2.77	-	-	0.51	2.77
Total Int'l Passive Equities	1.84	0.51	-	2.77	-	-	0.51	2.77
Real Estate Equity Securities	-	-	-	-	-	-	-	-
Total Public Equities	4,241.16	7,536.81	-	17.77	1,232.10	2.91	8,768.91	20.68

Actual Fees Incurred

Through June 30, 2023

BOARD OF EDUCATION RETIREMENT SYSTEM									
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022									
INVESTMENT STYLE (FIXED INCOME)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS	
Total Fixed Income	2,731.87	3,242.62	-	11.87	-	-	3,242.62	11.87	
Structured Program:	1,363.50	668.88	-	4.91	-	-	668.88	4.91	
Government Treas/Agency Sector	520.21	100.31	-	1.93	-	-	100.31	1.93	
Long Duration Treasury	62.46	6.42	-	1.03	-	-	6.42	1.03	
Mortgage Sector	361.62	156.18	-	4.32	-	-	156.18	4.32	
Investment Grade Credit Sector	419.21	405.96	-	9.68	-	-	405.96	9.68	
Developing Managers	124.26	250.09	-	20.13	-	-	250.09	20.13	
Emerging Managers	-	-	-	-	-	-	-	-	
TIPS:	309.15	15.45	-	0.50	-	-	15.45	0.50	
Active TIPS Managers	-	-	-	-	-	-	-	-	
Passive TIPS Managers	309.15	15.45	-	0.50	-	-	15.45	0.50	
High Yield	766.05	2,231.92	-	29.14	-	-	2,231.92	29.14	
Bank Loans	0.42	1.30	-	30.64	-	-	1.30	30.64	
Convertible Bonds	-	-	-	-	-	-	-	-	
ETI - Access - RBC	10.47	18.56	-	17.73	-	-	18.56	17.73	
ETI - AFL-CIO HIT	17.75	56.42	-	31.79	-	-	56.42	31.79	
Other ETI Programs (Internally Managed)	15.07	-	-	-	-	-	-	-	
Short Term (Internally Managed & Other)	125.21	-	-	-	-	-	-	-	
Total Public Markets	6,973.03	10,779.43	-	15.46	1,232.10	1.77	12,011.53	17.23	
INVESTMENT STYLE (PRIVATE MARKETS)									
Hedge Funds	-	-	-	-	-	-	-	-	
Private Equity	830.71	10,568.48	2,658.80	159.23	11,010.25	132.54	24,237.53	291.77	
Private Real Estate	569.50	5,680.98	1,781.60	131.04	6,278.74	110.25	13,741.33	241.29	
Infrastructure	197.00	4,273.43	1,085.59	272.04	(683.97)	(34.72)	4,675.05	237.32	
Opportunistic Fixed Income	135.55	1,128.53	472.06	118.08	471.98	34.82	2,072.56	152.90	
Total Private Markets	1,732.75	21,651.42	5,998.05	159.57	17,077.00	98.55	44,726.47	258.12	
Total Overall	8,705.78	32,430.85	5,998.05	44.14	18,309.11	21.03	56,738.00	65.17	

The overall carried interest and performance incentive fees paid by BERS for the Fiscal Year: 21.03 BPS

General Footnotes:



Through June 30, 2023

**NYC BOARD OF EDUCATION RETIREMENT SYSTEM
SECURITIES LENDING INCOME
June 30, 2023**

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	70,000	-	-	70,000
1990	79,000	-	-	79,000
1991	111,000	-	-	111,000
1992	122,000	11,000	-	133,000
1993	79,000	32,000	15,000	126,000
1994	93,000	77,000	20,000	190,000
1995	112,000	93,000	12,000	217,000
1996	99,000	76,000	27,000	202,000
1997	101,000	126,000	40,000	267,000
1998	111,000	170,000	60,000	341,000
1999	159,000	263,000	100,000	522,000
2000	193,000	310,000	97,000	600,000
2001	295,000	208,000	159,000	662,000
2002	209,000	143,000	152,000	504,000
2003	153,000	158,000	195,000	506,000
2004	226,000	255,000	174,000	655,000
2005	384,000	479,000	217,000	1,080,000
2006	303,000	734,000	246,000	1,283,000
2007	593,000	1,208,000	272,000	2,073,000
2008	2,514,000	2,266,000	451,000	5,231,000
2009	698,000	1,416,000	367,000	2,481,000
2010	246,000	729,000	326,000	1,301,000
2011	340,000	943,000	599,000	1,882,000
2012	516,000	1,144,000	495,000	2,155,000
2013	349,000	1,325,000	446,000	2,120,000
2014	287,000	512,000	1,387,000	2,186,000
2015	338,000	429,000	1,985,000	2,752,000
2016	418,000	1,585,000	1,685,000	3,688,000
2017	686,000	1,015,000	1,215,000	2,916,000
2018	582,738	682,039	954,109	2,218,886
2019	319,440	712,602	788,647	1,820,689
2020	360,464	392,674	356,478	1,109,617
2021	672,093	566,378	92,881	1,331,351
2022	979,471	770,306	77,445	1,827,222
2023 (6 Months)	525,289	317,070	35,577	877,936
Since Inception	<u>13,323,496</u>	<u>19,148,069</u>	<u>13,047,136</u>	<u>45,518,701</u>



**New York City
Board of Education Retirement System**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
SYSTEM RETURN SUMMARY															
5 BERS-TOTAL PORTFOLIO - GROSS	8,498	100.00	3.15	9.26	8.11	(8.49)	(12.05)	15.00	16.68	9.26	8.68	7.85	8.75	8.73	07/01/1987
BERS - ESTIMATED INVESTMENT FEES			(0.17)	(0.70)	(0.31)	(0.52)	(0.53)	(0.59)	(0.29)	(0.70)	(0.55)	(0.43)			
EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.11)	(0.05)	(0.13)	(0.12)	(0.13)	(0.12)	(0.11)	(0.12)	(0.12)			
EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.14)	(0.59)	(0.26)	(0.39)	(0.41)	(0.46)	(0.17)	(0.59)	(0.43)	(0.31)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL PORTFOLIO - NET MGR			2.99	8.55	7.79	(9.01)	(12.57)	14.41	16.39	8.55	8.12	7.41			
BOARD OF EDUCATION POLICY BENCHMARK			3.65	7.93	8.85	(8.31)	(13.31)	14.19	14.46	7.93	8.05	7.14	7.93		
EXCESS RETURN			(0.66)	0.62	(1.06)	(0.70)	0.74	0.22	1.93	0.62	0.07	0.27	0.82		
EQUITY RETURN DETAIL															
18 BERS-TOTAL EQUITY (INCLUDES ALTERNATIVES) - GROSS	5,953	70.05	4.50	12.10	10.15	(8.36)	(12.90)	21.72	20.57	12.10	13.33	10.32	11.31	9.56	08/01/1993
ESTIMATED INVESTMENT FEES			(0.22)	(0.95)	(0.42)	(0.71)	(0.70)	(0.85)	(0.39)	(0.95)	(0.77)	(0.59)			
EST MANAGEMENT FEES			(0.22)	(0.95)	(0.42)	(0.71)	(0.70)	(0.85)	(0.39)	(0.95)	(0.77)	(0.59)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL EQUITY (INCLUDES ALTERNATIVES) - NET MGR			4.27	11.16	9.73	(9.08)	(13.60)	20.88	20.18	11.16	12.56	9.73			
26 BERS-TOTAL EQUITY - GROSS	3,890	45.78	6.26	17.56	14.96	(20.26)	(21.59)	17.30	23.57	17.56	10.60	8.47	10.15	8.57	04/01/2004
ESTIMATED INVESTMENT FEES			(0.04)	(0.18)	(0.09)	(0.15)	(0.14)	(0.22)	(0.20)	(0.18)	(0.19)	(0.18)			
EST MANAGEMENT FEES			(0.04)	(0.18)	(0.09)	(0.15)	(0.14)	(0.22)	(0.20)	(0.18)	(0.19)	(0.18)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL EQUITY - NET MGR			6.22	17.38	14.87	(20.41)	(21.72)	17.08	23.38	17.38	10.41	8.28			
34 BERS-TOTAL DOMESTIC EQUITY - GROSS	2,540	29.89	8.00	18.51	15.98	(14.96)	(20.37)	25.13	21.91	18.51	13.20	11.10	12.30	10.17	09/01/1991
ESTIMATED INVESTMENT FEES			(0.01)	(0.05)	(0.02)	(0.08)	(0.07)	(0.13)	(0.11)	(0.05)	(0.09)	(0.10)			
BERS-TOTAL DOMESTIC EQUITY - NET MGR			7.98	18.47	15.96	(15.05)	(20.44)	25.00	21.80	18.47	13.11	11.00			
RUSSELL 3000 (DAILY)			8.39	18.95	16.17	(13.87)	(19.21)	25.66	20.89	18.95	13.89	11.39	12.34	10.08	
EXCESS RETURN			(0.40)	(0.49)	(0.21)	(1.18)	(1.23)	(0.66)	0.91	(0.49)	(0.78)	(0.39)	(0.04)	0.09	
44 BERS-TOTAL SMALL CAP - GROSS	143	1.68	5.09	12.21	9.67	(21.59)	(22.70)	23.03	24.30	12.21	12.30	6.07	8.94	7.24	04/01/2004
ESTIMATED INVESTMENT FEES			(0.04)	(0.15)	(0.07)	(0.73)	(0.71)	(0.68)	(0.21)	(0.15)	(0.61)	(0.36)			
BERS-TOTAL SMALL CAP - NET MGR			5.06	12.07	9.60	(22.32)	(23.41)	22.35	24.10	12.07	11.69	5.71			
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	8.26	7.66	
EXCESS RETURN			(0.15)	(0.24)	1.52	2.88	(2.98)	7.53	4.13	(0.24)	0.87	1.50	0.68	(0.42)	
54 BERS-TOTAL MID CAP - GROSS	228	2.68	2.18	12.15	6.55	(24.85)	(22.30)	10.77	26.31	12.15	6.73	6.06	10.65	11.63	10/01/2010
ESTIMATED INVESTMENT FEES			(0.08)	(0.34)	(0.16)	(0.28)	(0.23)	(0.70)	(1.19)	(0.34)	(0.44)	(0.73)			
BERS-TOTAL MID CAP - NET MGR			2.10	11.81	6.39	(25.13)	(22.53)	10.07	25.12	11.81	6.29	5.33			
RUSSELL MIDCAP (DAILY)			4.76	14.92	9.01	(17.30)	(17.32)	22.58	17.10	14.92	12.50	8.46	10.32	11.55	
EXCESS RETURN			(2.66)	(3.11)	(2.62)	(7.83)	(5.22)	(12.52)	8.02	(3.11)	(6.21)	(3.13)	0.33	0.08	
64 BERS-TOTAL RUSSELL 1000 - GROSS	1,459	17.16	8.55	19.00	16.62	(13.66)	(19.95)	26.64	20.97	19.00	13.74	11.74	11.95	11.95	04/01/2018
ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			
BERS-TOTAL RUSSELL 1000 - NET MGR			8.55	19.00	16.62	(13.66)	(19.95)	26.64	20.97	19.00	13.73	11.74	11.95	11.95	
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(13.04)	(19.13)	26.45	20.96	19.36	14.09	11.92	12.07	12.07	
EXCESS RETURN			(0.03)	(0.36)	(0.06)	(0.63)	(0.82)	0.18	0.00	(0.36)	(0.36)	(0.18)	(0.12)	(0.12)	
74 BERS-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	694	8.17	9.57	21.19	19.61	(12.23)	(20.15)	27.51	22.41	21.19	14.39	13.06	13.32	13.32	05/01/2018
ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)			
BERS-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			9.57	21.19	19.61	(12.24)	(20.15)	27.50	22.40	21.19	14.39	13.05	13.31	13.31	
RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42	(11.46)	(19.77)	27.90	22.37	20.88	14.65	13.19	13.45	13.45	
EXCESS RETURN			(0.32)	0.31	0.19	(0.78)	(0.39)	(0.40)	0.03	0.31	(0.26)	(0.14)	(0.14)	(0.14)	



Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL															
86	BERS-TOTAL EMERGING MANAGER - GROSS	17	0.20	3.01	13.95	8.56	(17.02)	(15.72)	25.72	19.98	13.95	16.64	8.01	9.01	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.20)	(0.64)	(0.34)	(0.48)	(0.48)	(0.70)	(0.60)	(0.64)	(0.66)	(0.58)	(0.55)	
	BERS-TOTAL EMERGING MANAGER - NET MGR			2.81	13.31	8.22	(17.50)	(16.20)	25.02	19.38	13.31	15.98	7.43	8.46	
	RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	6.38	
	EXCESS RETURN			(2.40)	1.01	0.14	7.70	4.23	10.20	(0.58)	1.01	5.15	3.80	2.08	
96	BERS-TOTAL WORLD ex-USA EQUITY - GROSS	684	8.05	2.94	19.59	14.72	(31.35)	(24.63)	3.28	34.62	19.59	6.73	5.11	7.42	7.59
	ESTIMATED INVESTMENT FEES			(0.06)	(0.30)	(0.14)	(0.17)	(0.18)	(0.25)	(0.33)	(0.30)	(0.26)	(0.26)		
	BERS-TOTAL WORLD ex-USA EQUITY - NET MGR			2.87	19.29	14.58	(31.51)	(24.81)	3.02	34.29	19.29	6.47	4.85		
	NYC DEVELOPED EQUITY BENCHMARK			2.67	16.35	10.46	(17.73)	(15.26)	12.39	8.32	16.35	8.87	4.17	5.37	5.91
	EXCESS RETURN			0.20	2.95	4.12	(13.78)	(9.55)	(9.37)	25.97	2.95	(2.41)	0.68	2.05	1.69
106	BERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	578	6.80	3.32	20.48	15.88	(33.39)	(25.88)	0.34	37.50	20.48	5.69	4.94	5.75	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.06)	(0.28)	(0.13)	(0.15)	(0.17)	(0.23)	(0.32)	(0.28)	(0.24)	(0.24)	(0.25)	
	BERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			3.26	20.20	15.74	(33.54)	(26.05)	0.11	37.17	20.20	5.44	4.70	5.50	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			3.03	17.41	11.29	(16.76)	(14.29)	12.62	7.59	17.41	9.30	4.58	4.17	
	EXCESS RETURN			0.23	2.78	4.45	(16.79)	(11.76)	(12.51)	29.59	2.78	(3.86)	0.12	1.34	
126	BERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	106	1.24	0.76	15.09	8.65	(21.06)	(18.57)	19.51	17.27	15.09	11.52	4.88	8.92	8.09
	ESTIMATED INVESTMENT FEES			(0.08)	(0.38)	(0.18)	(0.26)	(0.27)	(0.39)	(0.39)	(0.38)	(0.37)	(0.35)		
	BERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			0.67	14.71	8.47	(21.32)	(18.83)	19.12	16.88	14.71	11.16	4.53		
	S&P EPAC SMALL CAP USD NET			0.17	10.76	6.71	(26.27)	(22.69)	8.06	13.78	10.76	5.12	0.86	5.83	5.14
	EXCESS RETURN			0.50	3.95	1.77	4.96	3.86	11.06	3.10	3.95	6.04	3.67	3.09	2.95
136	BERS-TOTAL EMERGING MARKETS - GROSS	429	5.05	1.67	5.23	7.62	(26.28)	(22.41)	1.55	13.05	5.23	2.76	0.34	3.50	6.49
	ESTIMATED INVESTMENT FEES			(0.11)	(0.47)	(0.24)	(0.32)	(0.34)	(0.41)	(0.26)	(0.47)	(0.40)	(0.33)		
	BERS-TOTAL EMERGING MARKETS - NET MGR			1.55	4.76	7.38	(26.60)	(22.75)	1.13	12.79	4.76	2.35	0.01		
	MSCI EMERGING MARKETS			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	0.93	2.95	
	EXCESS RETURN			0.66	3.01	2.49	(1.32)	(2.66)	3.68	(5.52)	3.01	0.03	(0.92)	0.55	
146	BERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	427	5.03	1.67	5.24	7.63	(26.29)	(22.42)	1.69	11.09	5.24	2.46	(0.19)	3.23	6.45
	ESTIMATED INVESTMENT FEES			(0.12)	(0.48)	(0.24)	(0.32)	(0.34)	(0.43)	(0.37)	(0.48)	(0.43)	(0.38)		
	BERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			1.56	4.77	7.39	(26.61)	(22.76)	1.26	10.72	4.77	2.03	(0.58)		
	MSCI EMERGING MARKETS			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	0.93	2.95	6.34
	EXCESS RETURN			0.66	3.02	2.50	(1.32)	(2.67)	3.80	(7.59)	3.02	(0.29)	(1.51)	0.28	0.10
156	BERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	2	0.02	0.87	2.13	5.11	(24.78)	(19.57)	(2.08)	17.29	2.13	2.62	1.09	4.74	12/01/2016
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	
	BERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			0.86	2.10	5.10	(24.79)	(19.57)	(2.10)	17.27	2.10	2.60	1.07	4.71	
	MSCI EMERGING MARKETS			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	0.93	4.61	
	EXCESS RETURN			(0.03)	0.36	0.21	0.49	0.52	0.44	(1.04)	0.36	0.29	0.14	0.10	
166	BERS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	76	0.90	3.03	15.41	11.29	(20.64)	(17.16)	9.43	17.00	15.41	8.83	4.93	5.99	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.27)	(0.59)	(0.38)	(0.26)	(0.27)	(0.53)	(0.41)	(0.59)	(0.48)	(0.42)	(0.42)	
	BERS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			2.76	14.82	10.91	(20.90)	(17.43)	8.90	16.60	14.82	8.35	4.50	5.57	
	MSCI ACWI EX USA IMI NET			2.38	12.47	9.10	(19.86)	(16.58)	8.53	11.12	12.47	7.33	3.38	4.57	
	EXCESS RETURN			0.38	2.35	1.80	(1.04)	(0.85)	0.37	5.48	2.35	1.02	1.54	1.00	
176	BERS-TOTAL GLOBAL EQUITY - GROSS	161	1.90	8.38	28.03	23.03	(29.54)	(28.80)	12.70	39.74	28.03	8.87	10.57	10.21	06/01/2018
	ESTIMATED INVESTMENT FEES			(0.14)	(0.68)	(0.32)	(0.37)	(0.37)	(0.60)	(0.77)	(0.68)	(0.58)	(0.60)	(0.60)	
	BERS-TOTAL GLOBAL EQUITY - NET MGR			8.23	27.34	22.71	(29.91)	(29.17)	12.10	38.98	27.34	8.29	9.98	9.61	
	MSCI AC WORLD (DAILY CONST)			6.18	16.53	13.93	(15.75)	(18.36)	18.54	16.25	16.53	10.99	8.10	7.85	
	EXCESS RETURN			2.05	10.82	8.77	(14.16)	(10.81)	(6.44)	22.72	10.82	(2.70)	2.47	1.76	

Consolidated Performance Report

Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
ALTERNATIVE EQUITY RETURN DETAIL																
188	BERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	1,008	11.86	3.01	2.07	4.53	31.85	5.77	52.85	18.72	2.07	27.74	20.44	18.81	10.84	07/01/2006
	ESTIMATED INVESTMENT FEES			(0.54)	(2.32)	(1.12)	(3.55)	(2.25)	(4.14)	(1.24)	(2.32)	(2.78)	(2.05)			
	BERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			2.47	(0.25)	3.41	28.30	3.52	48.72	17.48	(0.25)	24.96	18.39			
	NYC R3000 +3% LAGGED			7.96	(5.81)	16.55	15.25	(15.11)	35.74	18.42	(5.81)	21.99	13.74	14.97	12.95	
	EXCESS RETURN			(5.49)	5.56	(13.14)	13.04	18.63	12.97	(0.94)	5.56	2.98	4.65	3.84	(2.11)	
198	BERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	747	8.79	(1.69)	(0.08)	(3.78)	32.25	19.46	24.29	0.82	(0.08)	13.43	10.27	11.44	11.45	12/01/2010
	ESTIMATED INVESTMENT FEES			(0.26)	(1.49)	(0.53)	(2.37)	(2.06)	(1.90)	(0.63)	(1.49)	(1.57)	(1.18)			
	BERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			(1.95)	(1.57)	(4.31)	29.88	17.40	22.39	0.18	(1.57)	11.85	9.09			
	NCREIF NFI-ODCE NET + 100 BP			(2.64)	(9.83)	(5.69)	29.57	7.61	22.21	1.35	(9.83)	8.11	6.61	8.84	10.10	
	EXCESS RETURN			0.69	8.26	1.38	0.32	9.79	0.18	(1.16)	8.26	3.74	2.48	2.59	1.35	
208	BERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	307	3.62	3.31	11.00	6.80	16.96	13.73	17.75	10.82	11.00	16.40	14.05	14.76	12/01/2013	
	ESTIMATED INVESTMENT FEES			(1.29)	(3.83)	(1.70)	(3.37)	(3.44)	(3.31)	(1.40)	(3.83)	(3.10)	(2.41)	(2.95)		
	BERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			2.02	7.17	5.10	13.59	10.30	14.44	9.42	7.17	13.29	11.64	11.81		
	CPI + 4%			1.67	7.22	3.63	13.29	10.70	11.48	5.37	7.22	9.97	8.05	6.87		
	EXCESS RETURN			0.35	(0.04)	1.46	0.30	(0.41)	2.96	4.05	(0.04)	3.32	3.59	4.94		

Consolidated Performance Report

Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN DETAIL																
220	BERS-TOTAL FIXED INCOME - GROSS	2,545	29.95	0.13	2.90	3.55	(8.85)	(10.53)	2.00	9.20	2.90	(0.71)	2.58	2.89	7.11	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.04)	(0.19)	(0.08)	(0.12)	(0.15)	(0.13)	(0.10)	(0.19)	(0.14)	(0.12)			
	EST MANAGEMENT FEES			(0.04)	(0.19)	(0.08)	(0.12)	(0.15)	(0.13)	(0.10)	(0.19)	(0.14)	(0.12)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	BERS-TOTAL FIXED INCOME - NET MGR			0.09	2.71	3.47	(8.97)	(10.67)	1.87	9.09	2.71	(0.85)	2.45			
228	BERS-FIXED INCOME (ex OFI & CASH) - GROSS	2,223	26.16	(0.06)	2.74	3.54	(9.99)	(11.64)	1.32	9.85	2.74	(1.26)	2.34	2.71	11/01/2013	
	ESTIMATED INVESTMENT FEES			(0.04)	(0.14)	(0.07)	(0.11)	(0.12)	(0.12)	(0.11)	(0.14)	(0.12)	(0.12)	(0.13)		
	EST MANAGEMENT FEES			(0.04)	(0.14)	(0.07)	(0.11)	(0.12)	(0.12)	(0.11)	(0.14)	(0.12)	(0.12)	(0.13)		
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	BERS-FIXED INCOME (ex OFI & CASH) - NET MGR			(0.09)	2.60	3.46	(10.10)	(11.75)	1.20	9.74	2.60	(1.39)	2.23	2.58		
236	BERS-TOTAL STRUCTURED FIXED INCOME - GROSS	1,054	12.40	(0.77)	(0.61)	2.38	(10.23)	(12.97)	(1.48)	10.05	(0.61)	(3.91)	1.38	2.14	6.65	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.03)	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)			
	BERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			(0.79)	(0.67)	2.35	(10.28)	(13.01)	(1.53)	10.00	(0.67)	(3.96)	1.33			
	NYC CUSTOM STRUCTURED INDEX-BERS			(0.79)	(0.87)	2.29	(10.27)	(13.15)	(1.43)	11.38	(0.87)	(3.96)	1.84	2.31		
	EXCESS RETURN			0.01	0.20	0.06	(0.00)	0.14	(0.10)	(1.38)	0.20	0.01	(0.51)	(0.17)		
246	BERS-TOTAL GOVERNMENT - GROSS	470	5.53	(1.19)	(1.92)	1.82	(7.95)	(11.57)	(2.05)	10.87	(1.92)	(4.26)	1.47	1.96	6.27	05/01/1987
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)			
	BERS-TOTAL GOVERNMENT - NET MGR			(1.19)	(1.95)	1.81	(7.97)	(11.59)	(2.07)	10.84	(1.95)	(4.29)	1.45			
	CUSTOM GOVERNMENT BENCHMARK - BOE			(1.27)	(2.14)	1.94	(8.33)	(12.29)	(2.09)	13.94	(2.14)	(4.53)	2.38	2.55		
	EXCESS RETURN			0.08	0.19	(0.13)	0.36	0.70	0.02	(3.10)	0.19	0.24	(0.93)	(0.59)		
256	BERS-TOTAL MORTGAGE - GROSS	291	3.42	(0.54)	(1.50)	2.05	(8.71)	(11.77)	(0.74)	4.47	(1.50)	(3.42)	0.36	1.41	4.71	08/01/1993
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.03)	(0.04)	(0.05)	(0.04)	(0.04)	(0.06)	(0.05)	(0.05)			
	BERS-TOTAL MORTGAGE - NET MGR			(0.55)	(1.56)	2.02	(8.75)	(11.82)	(0.79)	4.42	(1.56)	(3.47)	0.31			
	NYC CUSTOM MORTGAGE BENCHMARK			(0.64)	(1.52)	1.87	(9.03)	(11.81)	(1.04)	3.91	(1.52)	(3.75)	0.10	1.16	4.26	
	EXCESS RETURN			0.09	(0.04)	0.15	0.28	(0.01)	0.26	0.52	(0.04)	0.28	0.21	0.25	0.45	
266	BERS-TOTAL INVESTMENT GRADE CORPORATE - GROSS	293	3.45	(0.32)	1.46	3.66	(14.56)	(16.67)	(1.36)	10.51	1.46	(3.60)	1.64	2.68	6.35	04/01/1987
	ESTIMATED INVESTMENT FEES			(0.03)	(0.11)	(0.06)	(0.08)	(0.08)	(0.10)	(0.09)	(0.11)	(0.09)	(0.09)			
	BERS-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			(0.35)	1.35	3.60	(14.64)	(16.75)	(1.45)	10.41	1.35	(3.69)	1.54			
	NYC CUSTOM IGC BENCHMARK			(0.29)	1.55	3.21	(14.19)	(15.76)	(0.85)	9.70	1.55	(3.43)	1.62	2.45		
	EXCESS RETURN			(0.06)	(0.20)	0.40	(0.45)	(0.99)	(0.61)	0.71	(0.20)	(0.26)	(0.08)	0.24		

Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
FIXED INCOME RETURN DETAIL															
278	BERS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	114	1.34	(0.49)	0.10	2.79	(10.77)	(13.13)	(1.12)	0.10				(3.92)	09/01/2020
	ESTIMATED INVESTMENT FEES			(0.05)	(0.21)	(0.11)	(0.18)	(0.18)	(0.20)	(0.21)				(0.19)	
	BERS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			(0.54)	(0.11)	2.68	(10.95)	(13.31)	(1.32)	(0.11)				(4.11)	
	BLOOMBERG U.S. AGGREGATE			(0.84)	(0.94)	2.09	(10.29)	(13.01)	(1.54)	(0.94)				(4.43)	
	EXCESS RETURN			0.30	0.83	0.59	(0.66)	(0.30)	0.23	0.83				0.31	
288	BERS-TOTAL TIPS - GROSS	256	3.01	(1.44)	(1.43)	1.98	(5.11)	(11.91)	5.93	11.07	(1.43)	(0.13)	2.51	2.14	3.44
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)		
	BERS-TOTAL TIPS - NET MGR			(1.44)	(1.43)	1.98	(5.11)	(11.92)	5.93	11.06	(1.43)	(0.13)	2.50		
	BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			(1.42)	(1.40)	1.87	(5.14)	(11.85)	5.96	10.99	(1.40)	(0.12)	2.49	2.08	3.31
	EXCESS RETURN			(0.02)	(0.03)	0.11	0.03	(0.07)	(0.03)	0.07	(0.03)	(0.01)	0.01	0.06	0.12
298	BERS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	40	0.47	(1.15)	(0.20)	2.22	(8.66)	(10.99)	(0.72)	6.81	(0.20)	(2.85)	1.68	2.50	6.03
	ESTIMATED INVESTMENT FEES			(0.04)	(0.18)	(0.09)	(0.16)	(0.16)	(0.17)	(0.19)	(0.18)	(0.17)	(0.19)	(0.24)	(0.13)
	BERS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			(1.19)	(0.38)	2.13	(8.81)	(11.15)	(0.89)	6.63	(0.38)	(3.02)	1.49	2.26	5.90
	BERS CUSTOM BENCHMARK (NO CASH)			(0.51)	(0.47)	2.07	(8.48)	(10.76)	(0.96)	5.84	(0.47)	(3.08)	0.94	1.65	
	EXCESS RETURN			(0.68)	0.09	0.06	(0.33)	(0.39)	0.08	0.78	0.09	0.06	0.55	0.61	
308	BERS-TOTAL HIGH YIELD - GROSS	759	8.93	1.57	10.11	5.91	(11.16)	(9.33)	6.26	8.45	10.11	4.41	4.36	4.94	5.64
	ESTIMATED INVESTMENT FEES			(0.07)	(0.32)	(0.15)	(0.26)	(0.26)	(0.31)	(0.34)	(0.32)	(0.31)	(0.31)		
	BERS-TOTAL HIGH YIELD - NET MGR			1.50	9.79	5.76	(11.42)	(9.59)	5.95	8.12	9.79	4.11	4.05		
	HIGH YIELD CUSTOM BENCHMARK			1.75	9.07	5.38	(12.82)	(11.18)	5.26	7.05	9.07	3.12	3.34	4.20	5.44
	EXCESS RETURN			(0.25)	0.71	0.38	1.40	1.59	0.69	1.07	0.71	0.98	0.71	0.74	0.20
318	BERS- TOTAL BANK LOANS - GROSS	-	-							1.43					12/01/2012
	ESTIMATED INVESTMENT FEES									(0.31)					
	BERS-TOTAL BANK LOANS - NET MGR									1.12					
	CSFB LEVERAGED LOAN INDEX						(2.68)	(1.06)	5.40	2.78					
	EXCESS RETURN									(1.66)					
328	BERS-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	274	3.23	1.49	4.87	4.08	8.67	2.58	18.81		4.87			10.71	08/01/2020
	ESTIMATED INVESTMENT FEES			(0.13)	(0.74)	(0.18)	(0.49)	(0.60)	(0.47)	(0.74)				(0.44)	
	BERS-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			1.36	4.13	3.91	8.18	1.98	18.34	4.13				10.27	
	OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			3.22	13.02	7.42	(4.95)	(2.79)	8.29	13.02				7.08	
	EXCESS RETURN			(1.86)	(8.89)	(3.51)	13.13	4.77	10.05	(8.89)				3.20	
CASH SUMMARY															
340	Short Term BERS - GROSS	48	0.56	1.25	3.80	2.37	0.01	1.41	0.07	0.44	3.80	1.30	1.47	1.12	1.88
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Short Term BERS - NET MGR			1.25	3.80	2.37	0.01	1.41	0.07	0.44	3.80	1.30	1.47	1.12	
344	Cash Account	0	0.00												
346	Securities Lending	0	0.00												



**New York City
Board of Education Retirement System**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
Wasatch-US SCG	\$78	0.91	6.72	17.54	16.24	(31.14)	19.39	38.80		
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63		
Excess			(0.34)	(0.99)	2.68	(4.78)	16.56	4.17		
BlackRock US SCG R2000	\$0	0.00	7.01	18.46	13.50	(26.38)	3.35	34.42	28.39	(9.14)
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63	28.48	(9.31)
Excess			(0.04)	(0.07)	(0.05)	(0.02)	0.51	(0.21)	(0.09)	0.17
BlackRock US SCV R2000	\$65	0.76	3.14	6.06	2.58	(14.51)	28.48	4.87	22.60	(12.79)
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63	22.39	(12.86)
Excess			(0.05)	0.06	0.08	(0.03)	0.21	0.24	0.20	0.08
Wellington US MCC	\$228	2.68	2.10	11.81	6.39	(22.53)	10.07	25.12	32.68	(7.37)
S&P 400 MIDCAP INDEX (DAILY)			4.85	17.61	8.84	(13.06)	24.76	13.66	26.20	(11.08)
Excess			(2.75)	(5.80)	(2.45)	(9.47)	(14.69)	11.46	6.48	3.71
BlackRock US LMC R1000 Core	\$1,459	17.16	8.55	19.00	16.62	(19.95)	26.64	20.97	31.36	
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(19.13)	26.45	20.96	31.43	
Excess			(0.03)	(0.36)	(0.06)	(0.82)	0.18	0.00	(0.07)	
SSGA-US LC Russell TOP 200 Core	\$694	8.17	9.57	21.19	19.61	(20.15)	27.50	22.40	31.66	
RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42	(19.77)	27.90	22.37	31.75	
Excess			(0.32)	0.31	0.19	(0.39)	(0.40)	0.03	(0.09)	
FUND OF FUNDS										
BERS-TOTAL FUNDS OF FUNDS	\$17	0.20	2.81	13.31	8.22	(16.20)	25.02	19.38	23.33	(8.27)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.40)	1.00	0.14	4.23	10.20	(0.58)	(2.20)	2.74

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
BERS-TOTAL LEGATO	\$17	0.20	2.81	13.31	8.22	(16.20)	25.02	19.38	23.33	(8.27)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.40)	1.00	0.14	4.23	10.20	(0.58)	(2.20)	2.74
NON - US EQUITY										
Sprucegrove WorldxUS LMCC	\$286	3.37	4.60	22.33	15.26	(14.43)	8.01	5.35	17.55	(13.67)
NYC Developed Value Benchmark ^[1]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			1.57	4.92	3.97	(0.14)	(4.61)	(2.24)	(4.94)	0.42
Baillie Gifford WorldxUS LMCC	\$291	3.43	1.91	18.00	16.19	(38.20)	(7.53)	66.99	36.64	(15.35)
NYC Developed Growth Benchmark ^[2]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			(1.12)	0.58	4.90	(23.91)	(20.15)	59.40	14.15	(1.26)
Acadian WorldxUS SCC	\$86	1.01	0.87	15.44	9.33	(17.95)	21.67	15.96	21.82	(19.22)
S&P EPAC Small Cap USD NET			0.17	10.76	6.71	(22.69)	8.06	13.78	23.71	(18.58)
Excess			0.70	4.68	2.62	4.74	13.61	2.18	(1.89)	(0.65)
Algert EAFE SCC	\$20	0.23	(0.46)	12.18	5.52	(21.66)	11.94	9.76		
MSCI EAFE SMALL CAP NET (DAILY)			0.58	10.18	5.53	(21.39)	10.10	12.34		
Excess			(1.04)	2.00	(0.00)	(0.27)	1.84	(2.59)		
EMERGING MARKETS										
Acadian EM	\$295	3.47	2.54	5.09	8.54	(20.75)	4.96	10.72	15.71	(17.27)
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			1.65	3.34	3.65	(0.66)	7.50	(7.59)	(2.71)	(2.70)
JP Morgan AM-EM ACG	\$132	1.55	(0.58)	4.24	4.91	(27.80)				
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)				
Excess			(1.48)	2.49	0.02	(7.71)				
BlackRock MSCI EM Core	\$2	0.02	0.86	2.10	5.10	(19.57)	(2.10)	17.27	18.76	(14.45)
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			(0.03)	0.36	0.21	0.52	0.44	(1.04)	0.34	0.12

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
INTERNATIONAL FOF										
BERS-TOTAL INTERNATIONAL FOF	\$76	0.90	2.76	14.82	10.91	(17.43)	8.90	16.60	22.25	(14.53)
MSCI ACWI ex USA IMI Net			2.38	12.47	9.10	(16.58)	8.53	11.12	21.63	(14.76)
Excess			0.38	2.35	1.80	(0.85)	0.37	5.48	0.62	0.23
BERS-TOTAL INTERNATIONAL XPONANCE										
BERS-TOTAL INTERNATIONAL XPONANCE	\$76	0.90	2.76	14.82	10.91	(17.43)	8.90	16.60	22.25	(14.53)
MSCI ACWI ex USA IMI Net			2.38	12.47	9.10	(16.58)	8.53	11.12	21.63	(14.76)
Excess			0.38	2.35	1.80	(0.85)	0.37	5.48	0.62	0.23
GLOBAL EQUITY										
Morgan Stanley-Global	\$74	0.87	11.59	37.21	34.67	(40.28)	0.63	58.66	38.03	
MSCI AC WORLD (Daily Const)			6.18	16.53	13.93	(18.36)	18.54	16.25	26.60	
Excess			5.41	20.68	20.74	(21.92)	(17.91)	42.41	11.44	
Fiera-Global	\$87	1.03	5.55	20.04	14.13	(18.27)	26.21	20.57	33.97	
MSCI World Index			6.83	18.51	15.09	(18.14)	21.82	15.90	27.67	
Excess			(1.28)	1.53	(0.96)	(0.13)	4.39	4.66	6.30	
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
BlackRock Mortgages	\$257	3.02	(0.56)	(1.55)	2.01	(11.81)	(0.79)	4.42	6.93	1.00
NYC Custom Mortgage Benchmark ⁽³⁾			(0.64)	(1.52)	1.87	(11.81)	(1.04)	3.91	6.68	1.01
Excess			0.09	(0.03)	0.15	0.01	0.26	0.52	0.25	(0.01)
Semper-Mortgages - Bivium	\$34	0.40	(0.67)		1.89					
Bloomberg US Mortgage Backed Securities			(0.64)		1.87					
Excess			(0.03)		0.03					
T Rowe Price-Corporate	\$258	3.03	(0.30)	1.51	3.67	(16.68)				
Bloomberg U.S. Corporate Inv Grade			(0.29)	1.55	3.21	(15.76)				
Excess			(0.02)	(0.04)	0.47	(0.92)				

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
SSGA LI Treasury	\$41	0.48	(1.80)	(5.05)	3.05	(21.24)	(3.60)	12.59	10.57	(0.18)
NYC - Treasury Agency Plus Five			(1.94)	(4.60)	2.86	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.14	(0.46)	0.20	(0.66)	0.17	(0.26)	0.17	(0.12)
New Century-LI Treasury - Bivium	\$34	0.40	(2.00)		2.66					
NYC - Treasury Agency Plus Five			(1.94)		2.86					
Excess			(0.06)		(0.19)					
SSGA IT Treasury 1-10Y	\$193	2.27	(1.14)	(1.00)	1.23	(7.75)	(1.73)	5.73		
USBIG TSY AGN 1-10			(1.11)	(1.08)	1.26	(7.79)	(1.66)	5.72		
Excess			(0.02)	0.07	(0.03)	0.03	(0.07)	0.02		
SSGA ST Treasury 1-3Y	\$151	1.77	(0.56)	0.25	1.06	(3.66)	(0.60)	3.05	3.56	1.51
FTSE US Government Bond 1-3 Years Index			(0.56)	0.16	1.04	(3.74)	(0.58)	3.09	3.56	1.56
Excess			(0.00)	0.10	0.02	0.08	(0.02)	(0.04)	0.00	(0.05)
SSGA LT Treasury 10Y Plus	\$51	0.60	(2.33)	(7.06)	4.51	(29.51)				
FTSE US Government Bond 10+ Years Index			(2.30)	(7.50)	4.39	(29.75)				
Excess			(0.04)	0.45	0.13	0.24				
Integrity-Credit - Bivium	\$35	0.42	(0.83)		2.94					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			(0.54)		(0.27)					
HIGH YIELD										
Mackay Shields High Yield	\$381	4.49	1.22	9.10	5.35	(8.60)	5.42	8.00	13.85	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			(0.53)	0.03	(0.04)	2.58	0.16	0.95	(0.47)	
Nomura High Yield	\$378	4.44	1.78	10.49	6.18	(10.57)	6.49	8.22	13.74	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			0.03	1.41	0.80	0.61	1.23	1.17	(0.58)	

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
BANK LOANS										
Barings Bank Loans	\$0	0.00						1.12	7.82	0.38
CSFB LEVERAGED LOAN INDEX								2.78	8.17	1.14
Excess								(1.66)	(0.36)	(0.76)
TIPS										
SSGA TIPS	\$256	3.01	(1.44)	(1.43)	1.98	(11.92)	5.93	11.06	8.44	(1.29)
Bloomberg Global Infl-Linked: U.S. TIPS			(1.42)	(1.40)	1.87	(11.85)	5.96	10.99	8.43	(1.26)
Excess			(0.02)	(0.03)	0.11	(0.07)	(0.03)	0.07	0.02	(0.03)
CORE FI-DEVELOPING MANAGERS										
Pugh-CorePlus	\$114	1.34	(0.54)	(0.11)	2.68	(13.31)	(1.32)			
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)			
Excess			0.30	0.83	0.59	(0.30)	0.23			
ECONOMICALLY TARGETED INVESTMENTS										
RBC Access MBS	\$9	0.11	(0.79)	(1.64)	1.79	(12.00)	(1.03)	6.14	7.21	0.49
Access RBC Benchmark			(0.76)	(1.37)	1.64	(10.38)	(1.46)	4.69	6.05	1.17
Excess			(0.04)	(0.27)	0.15	(1.61)	0.43	1.45	1.16	(0.69)
AFL-CIO Housing Investment Trust	\$16	0.19	(0.90)	(2.23)	1.94	(13.55)	(1.04)	6.20	7.78	0.16
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			(0.05)	(1.29)	(0.15)	(0.54)	0.50	(1.31)	(0.94)	0.15
CPC Construction Facility	\$4	0.04	0.61	7.18	4.83	3.80	3.89	0.67	6.87	4.14
CPC CONST BENCHMARK			1.50	5.33	2.93	3.75	2.42	2.73	4.09	3.99
Excess			(0.88)	1.85	1.90	0.04	1.47	(2.06)	2.78	0.15
BOA PPAR FNMA	\$1	0.01	(2.63)	2.02	1.61	(8.50)	(1.89)	6.12	13.54	2.33
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.18)	2.60	(0.53)	2.78	(1.52)	0.98	5.74	0.47

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Citibank PPAR FNMA	\$2	0.02	(2.64)	1.40	1.96	(11.34)	(1.56)	7.06	19.71	2.63
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.19)	1.98	(0.19)	(0.06)	(1.19)	1.92	11.91	0.77
Citibank PPAR GNMA	\$0	0.00	(1.31)	2.45	1.83	(5.04)	(1.10)	8.31	5.33	1.90
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.85	(0.45)	5.10	(0.29)	4.00	(1.41)	0.27
CFSB PPAR FNMA	\$0	0.00	(2.85)	1.03	1.95	(12.29)	(2.05)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.41)	1.62	(0.20)	(1.01)	(1.67)			
CFSB PPAR GNMA	\$0	0.00	(1.31)	1.83	1.74	(5.29)	0.03	8.01	5.91	0.99
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.23	(0.53)	4.85	0.84	3.69	(0.82)	(0.65)
CPC PPAR FNMA	\$1	0.01	(2.39)	1.51	1.99	(10.21)	1.14	7.00	13.18	2.31
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(1.94)	2.10	(0.16)	1.07	1.51	1.87	5.38	0.45
ECLF PPAR FNMA	\$0	0.00	(2.85)	1.26	2.02	(11.97)	(1.65)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.40)	1.84	(0.13)	(0.69)	(1.28)			
JPMC PPAR FNMA	\$3	0.04	(2.60)	0.34	1.70	(11.48)	(1.84)	8.33	14.68	1.68
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.16)	0.92	(0.45)	(0.21)	(1.47)	3.19	6.88	(0.18)
LIIF PPAR FNMA	\$2	0.02	(2.61)	2.64	1.89	(9.29)	(1.75)	6.44	16.35	2.27
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.16)	3.22	(0.25)	1.99	(1.37)	1.30	8.55	0.41

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
LIIF PPAR GNMA	\$0	0.00	1.87	4.69	4.06	(2.79)	0.84	6.19	5.54	2.53
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			2.26	5.09	1.78	7.35	1.65	1.87	(1.19)	0.89
LISC PPAR FNMA	\$0	0.01	(2.89)	(4.11)	1.96	(16.45)	(1.69)	31.93	14.95	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.45)	(3.52)	(0.18)	(5.17)	(1.32)	26.80	7.15	
NCBCI PPAR FNMA	\$0	0.00	(1.10)	2.26	1.95	(4.39)	0.66	8.49	4.08	2.00
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(0.65)	2.85	(0.19)	6.89	1.03	3.36	(3.72)	0.15
NCBCI PPAR GNMA	\$0	0.00	(1.06)	2.16	1.91	(4.17)	0.95	8.16	3.69	1.23
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.67)	2.56	(0.37)	5.97	1.77	3.85	(3.04)	(0.41)
Wells Fargo PPAR FNMA	\$1	0.01	(2.92)	1.40	1.92	(11.70)	(1.86)	28.61	21.71	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.47)	1.98	(0.22)	(0.42)	(1.48)	23.48	13.91	
CASH										
Short Term BERS	\$48	0.56	1.25	3.80	2.37	1.41	0.07	0.44	2.00	1.92
ICE BofA US 3-Month Treasury Bill			1.17	3.59	2.25	1.46	0.05	0.67	2.28	1.87
Excess			0.08	0.21	0.11	(0.05)	0.02	(0.23)	(0.28)	0.05
Cash Account	\$0	0.00								
Securities Lending	\$0	0.00								



**New York City
Board of Education Retirement System**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		1,712,336,925	1,080,946,937	757,768,651	978,502,467	1.61	14.1%
TOTAL ACTIVE							
Mesirow Financial Private Equity Partnership Fund III	2005	57,000,000	56,233,273	91,623,616	4,081,114	1.70	8.3%
Mesirow Financial Private Equity Partnership Fund IV	2006	25,000,000	24,342,233	42,766,368	4,099,197	1.93	11.0%
New York Fairview Private Equity Fund	2006	19,000,000	18,973,914	24,566,170	-	1.29	4.9%
Mesirow Financial Private Equity Partnership Fund V	2008	45,000,000	42,764,326	77,039,625	25,026,307	2.39	16.9%
Platinum Equity Capital Partners III	2011	15,000,000	14,656,020	27,608,290	2,792,047	2.07	35.8%
<i>NYCBERS - 2012 Emerging Manager Program</i>	<u>2012</u>	<u>14,650,000</u>	<u>15,267,795</u>	<u>23,520,189</u>	<u>8,449,492</u>	<u>2.09</u>	<u>16.5%</u>
Warburg Pincus Private Equity XI	2012	25,000,000	25,374,629	32,733,262	10,668,605	1.71	11.6%
Apollo Investment Fund VIII	2013	20,000,000	19,616,892	21,703,732	7,440,419	1.49	10.0%
ASF VI B	2013	15,000,000	12,394,143	16,017,995	2,181,912	1.47	12.2%
Carlyle Partners VI	2013	20,000,000	21,662,513	32,062,380	9,312,323	1.91	15.1%
Landmark - NYC Fund I	2013	6,000,000	5,497,541	6,557,780	3,161,192	1.77	15.6%
Landmark Equity Partners XV	2013	19,000,000	15,251,966	17,662,487	4,031,115	1.42	11.9%
ASF VI B NYC Co-Invest	2014	5,000,000	4,295,158	5,293,052	1,185,733	1.51	12.4%
Bridgepoint Europe V	2014	8,857,553	8,144,269	11,158,194	4,819,744	1.96	18.5%
Carlyle Partners VI - Side Car	2014	2,200,000	1,605,709	2,032,797	1,162,845	1.99	12.3%
Crestview Partners III	2014	15,000,000	13,985,150	8,438,946	12,857,737	1.52	11.9%
Crestview Partners III (Co-Investment B)	2014	5,000,000	5,181,674	250,760	6,124,860	1.23	3.8%
CVC Capital Partners VI	2014	20,037,822	19,886,330	21,744,634	17,771,907	1.99	17.0%
Lexington Capital Partners VIII	2014	20,000,000	18,191,549	18,059,228	12,289,690	1.67	16.7%
Vista Equity Partners Fund V	2014	25,000,000	31,168,358	36,563,352	33,229,180	2.24	19.6%
ASF VII B	2015	10,000,000	6,712,840	5,138,495	5,865,823	1.64	16.8%
ASF VII B NYC Co-Invest	2015	6,000,000	4,207,168	4,014,451	3,422,166	1.77	18.9%
Centerbridge Capital Partners III	2015	2,500,000	3,302,007	3,133,436	2,434,057	1.69	18.6%
EQT VII	2015	17,715,106	19,785,952	28,400,534	9,672,177	1.92	22.5%
<i>NYCBERS - 2015 Emerging Manager Program</i>	<u>2015</u>	<u>30,750,000</u>	<u>30,314,134</u>	<u>10,414,745</u>	<u>41,620,466</u>	<u>1.72</u>	<u>20.7%</u>
Siris Partners III	2015	3,500,000	3,609,330	2,708,159	2,703,353	1.50	11.8%
Warburg Pincus Private Equity XII	2015	21,500,000	21,550,297	22,806,281	20,776,280	2.02	18.1%
Welsh, Carson, Anderson & Stowe XII	2015	10,000,000	9,546,065	14,016,981	9,405,775	2.45	27.0%
American Securities Partners VII	2016	8,000,000	7,837,051	4,124,422	10,907,120	1.92	16.1%
Apax IX	2016	13,000,000	14,022,820	15,673,029	12,652,917	2.02	23.2%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
BCEC X Metro Co-Investment	2016	4,433,361	4,609,611	1,504,156	7,069,516	1.86	15.7%
Bridgepoint Europe V Co-Invest	2016	2,952,518	2,666,140	5,540,936	1,638,048	2.69	27.1%
Platinum Equity Capital Partners IV	2016	11,500,000	11,546,147	10,862,464	13,119,905	2.08	25.0%
Vista Equity Partners Fund VI	2016	16,000,000	19,952,417	16,768,400	24,277,001	2.06	19.6%
Ares Corporate Opportunities Fund V	2017	10,000,000	10,848,637	4,983,609	10,604,306	1.44	11.6%
BC European Capital X	2017	11,083,403	10,801,071	1,934,568	13,983,278	1.47	10.6%
CVC Capital Partners VII	2017	19,077,331	18,616,589	4,877,797	27,349,358	1.73	23.3%
Green Equity Investors VII	2017	10,000,000	9,560,814	7,895,978	12,408,649	2.12	22.6%
KKR Americas Fund XII	2017	16,000,000	15,479,260	6,848,375	20,159,995	1.74	20.8%
Palladium Equity Partners V	2017	10,000,000	6,407,404	1,772,445	6,640,816	1.31	10.3%
Warburg Pincus Financial Sector	2017	13,000,000	13,074,874	5,001,187	18,685,746	1.81	21.6%
Apollo Investment Fund IX	2018	32,000,000	27,811,767	9,968,706	30,763,709	1.46	25.0%
ASF VIII B	2018	21,000,000	11,084,145	2,705,114	13,934,667	1.50	25.3%
Bridgepoint Europe VI	2018	15,388,972	11,766,895	1,220,889	15,622,991	1.43	18.8%
EQT VIII	2018	14,145,141	13,399,206	9,555,397	14,089,445	1.76	26.9%
EQT VIII (Co-Invest)	2018	4,914,264	4,682,934	3,496,544	5,934,097	2.01	36.7%
ICG Strategic Equity Fund III	2018	13,340,000	9,594,114	3,394,938	14,709,680	1.89	38.6%
Lexington Capital Partners IX	2018	12,375,000	9,871,628	2,667,519	11,941,612	1.48	30.9%
Platinum Equity Capital Partners IV Co-Investment	2018	1,050,000	1,052,043	209,317	1,405,996	1.54	11.0%
Platinum Equity Small Cap Fund	2018	10,000,000	7,372,218	1,762,477	12,386,251	1.92	30.4%
Siris Partners IV	2018	10,000,000	8,303,432	1,190,061	11,822,226	1.57	18.8%
Vista Equity Partners Fund VII	2018	20,500,000	18,447,848	1,982,745	21,477,365	1.27	10.7%
Apax X	2019	12,500,000	10,059,884	786,310	11,649,976	1.24	19.8%
ASF VIII B NYC Co-Invest	2019	10,500,000	4,439,281	917,752	6,119,609	1.59	39.3%
Bridgepoint Europe VI Co-Invest	2019	3,847,243	2,700,240	-	4,336,153	1.61	19.9%
KKR European Fund V (USD)	2019	9,950,000	8,614,772	1,679,766	8,756,808	1.21	10.7%
<u>NYCBERS - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>28,416,666</u>	<u>15,838,577</u>	<u>1,163,778</u>	<u>24,775,679</u>	<u>1.64</u>	<u>25.5%</u>
Warburg Pincus Global Growth	2019	15,000,000	13,131,153	108,750	18,084,454	1.39	15.1%
WCAS XIII	2019	10,000,000	8,290,045	3,323,769	8,460,330	1.42	26.1%
Clearlake Capital Partners VI	2020	10,000,000	10,118,739	837,638	15,040,471	1.57	28.9%
Crestview IV Co-Invest	2020	2,666,667	1,505,833	499,375	2,063,986	1.70	57.0%
Crestview Partners IV	2020	8,000,000	4,517,486	1,296,889	5,470,907	1.50	41.4%
EQT IX	2020	19,643,000	19,281,891	1,906,396	21,037,121	1.19	14.0%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
EQT IX (Co-Invest)	2020	5,357,000	5,318,799	89,323	5,479,884	1.05	2.8%
FTV VI	2020	3,500,000	3,436,046	402,005	5,468,486	1.71	31.0%
ICG Strategic Equity Co-Investment Fund III	2020	4,444,119	3,284,658	1,977,317	3,809,872	1.76	34.5%
KKR Asian Fund IV	2020	25,000,000	9,047,156	69,250	9,192,488	1.02	2.0%
Lexington IX Co-Invest	2020	4,125,000	2,021,456	827,164	2,593,722	1.69	37.9%
Lindsay Goldberg V	2020	10,500,000	5,231,956	1,432,421	5,767,897	1.38	26.4%
NYC-Northbound Emerging Managers Program	2020	25,000,000	8,410,985	143,372	11,679,112	1.41	41.0%
Valor Equity Partners V	2020	3,500,000	2,927,922	8,424	4,011,367	1.37	20.4%
Clearlake Capital Partners VII	2021	30,000,000	15,412,033	730	15,967,612	1.04	5.4%
CVC Capital Partners VIII	2021	25,532,300	14,282,731	83,179	15,351,210	1.08	10.7%
Grain Communications Opportunity Fund III	2021	3,000,000	1,904,396	7,254	1,749,664	0.92	-7.1%
HarbourVest Centre Street Co-Investment Fund	2021	23,000,000	12,331,834	-	12,259,364	0.99	-0.6%
ICG Strategic Equity Co-Investment Fund IV	2021	10,000,000	8,309,184	-	9,235,821	1.11	11.6%
ICG Strategic Equity Fund IV	2021	20,000,000	10,835,350	1,389,730	13,665,448	1.39	28.0%
Insight Partners XII	2021	18,750,000	13,022,808	20,720	11,209,003	0.86	-12.3%
Insight Partners XII Buyout Annex Fund	2021	6,250,000	3,968,750	-	3,620,080	0.91	-7.7%
KKR Americas Fund XIII	2021	31,000,000	10,391,387	-	9,848,872	0.95	-7.5%
One Rock Capital Partners III	2021	25,000,000	18,588,734	2,559,255	21,296,953	1.28	27.6%
Permira VIII	2021	23,700,600	3,476,915	-	3,338,530	0.96	-4.0%
PSG V	2021	23,000,000	9,882,349	736,617	9,522,470	1.04	4.8%
Reverence Capital Partners Opportunities Fund V (FOO) (PE F	2021	7,000,000	1,432,465	11,392	1,432,313	1.01	0.7%
Reverence Capital Partners Opportunities Fund V (PE Fund III	2021	18,000,000	4,038,345	29,293	3,671,979	0.92	-8.3%
Stellex Capital Partners II	2021	25,000,000	15,453,272	939,765	15,721,257	1.08	8.4%
Vistria Fund IV	2021	13,000,000	9,598,844	183,232	9,863,214	1.05	5.3%
Apollo Investment Fund X	2022	20,250,000	-	-	(320,530)	0.00	
Bridgepoint Europe VII A	2022	17,504,850	-	-	(307,486)	0.00	
EQT X	2022	18,750,000	313,562	313,562	(165,282)	0.47	
EQT X (Co-Invest)	2022	6,250,000	1,137,836	-	1,131,964	0.99	-0.5%
FTV VII	2022	23,831,980	9,056,152	-	8,934,146	0.99	-1.5%
FTV VII Co-Invest	2022	5,362,200	1,569,829	-	1,567,758	1.00	-0.1%
Green Equity Investors IX	2022	19,875,000	-	-	(35,440)	0.00	
Green Equity Investors IX Co-Invest	2022	6,625,000	-	-	-	0.00	
Hg Genesis 10	2022	11,363,339	151,919	-	141,074	0.93	-14.9%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Hg NYC Co-Invest	2022	4,166,667	1,366,520	-	1,522,477	1.11	14.1%
Hg Saturn 3	2022	8,333,333	83,790	-	185,543	2.21	269.7%
Lexington Capital Partners X Co-Invest	2022	7,500,000	1,478,804	-	1,800,146	1.22	31.9%
Nordic Capital XI	2022	14,130,300	-	-	(156,488)	0.00	
Nordic N11 Co-Investment	2022	5,905,434	-	-	-	0.00	
Raine Partners IV	2022	5,333,333	-	-	(153,319)	0.00	
Thoma Bravo XV	2022	20,250,000	10,868,098	4,388	10,805,759	0.99	-0.7%
Thoma Bravo XV Co-Invest	2022	6,750,000	3,533,755	-	3,451,816	0.98	-3.2%
TPG Rise Climate	2022	8,333,334	2,250,754	42,824	2,616,970	1.18	34.0%
TPG Rise Climate Co-Invest	2022	16,666,666	4,183,500	-	5,948,052	1.42	62.3%
Valor Equity Partners VI	2022	7,500,000	1,302,085	-	1,126,774	0.87	
Vista Equity Partners Fund VIII	2022	20,250,000	2,729,751	-	2,404,825	0.88	
Welsh, Carson, Anderson & Stowe XIV	2022	30,000,000	2,713,377	-	1,778,356	0.66	-40.8%
Welsh, Carson, Anderson & Stowe XIV N Co-Invest	2022	10,000,000	-	-	-	0.00	
Apax XI	2023	25,000,000	-	-	(222,743)	0.00	
Apollo Fund X NYC Sidecar Co-Invest	2023	6,750,000	-	-	-	0.00	
Base10 Advancement Initiative II	2023	25,000,000	3,375,000	-	2,972,463	0.88	-11.9%
Bridgepoint Europe VII Co-Invest	2023	8,752,425	-	-	-	0.00	
KKR European Fund VI	2023	25,000,000	-	-	(386,260)	0.00	
Lexington Capital Partners X	2023	22,500,000	-	-	743,879	0.00	
Vista Co-Invest Fund 2022-4	2023	6,750,000	1,395,625	-	1,395,687	1.00	

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			1,128,497,683	876,331,763	482,242,363	724,049,702	1.38	10.3%
TOTAL PRIVATE REAL ESTATE								
LaSalle Property Fund	2010	Core Portfolio	38,600,000	38,600,000	16,738,993	59,468,028	1.97	9.4%
Trumbull Property Fund	2011	Core Portfolio	41,400,000	64,383,405	81,952,455	22,493,996	1.62	7.4%
NYC Asset Investor #2	2013	Core Portfolio	11,000,000	11,540,346	4,748,101	6,805,086	1.00	0.0%
USAA Eagle Real Estate Feeder 1	2013	Core Portfolio	18,000,000	20,649,669	2,742,458	25,747,576	1.38	6.8%
MetLife Core Property Fund	2014	Core Portfolio	15,000,000	15,000,000	5,884,933	23,436,268	1.95	9.6%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	25,000,000	29,893,540	4,893,540	38,139,876	1.44	11.4%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	10,000,000	9,739,474	4,268,329	18,825,641	2.37	20.9%
Jamestown Premier Property Fund	2016	Core Portfolio	6,246,307	7,365,369	2,996,333	3,235,339	0.85	-4.5%
NYCRS Artemis Mach II	2016	Core Portfolio	11,000,000	12,862,381	16,859,363	3,548,293	1.59	16.6%
Heitman Core Real Estate Debt Income Trust	2017	Core Portfolio	25,000,000	29,563,808	4,738,555	27,494,791	1.09	3.9%
Lion Industrial Trust	2017	Core Portfolio	18,000,000	24,618,342	5,365,054	48,939,136	2.21	19.6%
Almanac Realty Securities VIII	2018	Core Portfolio	10,500,000	6,383,935	1,462,883	6,295,876	1.22	12.1%
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	7,000,000	4,334,023	1,096,132	4,728,265	1.34	18.4%
Artemis Real Estate Partners Income and Growth Fund	2018	Core Portfolio	10,000,000	7,976,342	2,092,073	6,103,489	1.03	1.8%
Exeter Industrial Core Fund III	2019	Core Portfolio	12,700,000	12,480,346	1,369,843	13,368,291	1.18	9.7%
Harrison Street Core Property Fund	2019	Core Portfolio	80,000,000	83,104,421	2,751,027	84,125,894	1.05	4.3%
HSRE-Centre Street Core Co-Investment	2019	Core Portfolio	5,000,000	4,885,527	424,620	6,407,649	1.40	13.3%
Cortland Growth and Income	2020	Core Portfolio	10,000,000	11,421,848	1,421,848	13,994,721	1.35	13.3%
LaSalle GPS Co-Investment Program – Core	2021	Core Portfolio	10,000,000	6,170,280	260,560	6,369,840	1.07	n.m.
RREEF America REIT II	2021	Core Portfolio	17,000,000	17,000,000	867,951	19,402,676	1.19	n.m.
RREEF Core Plus Industrial Fund	2021	Core Portfolio	25,000,000	25,577,790	577,790	29,704,460	1.18	n.m.
EQT Exeter Industrial Core-Plus Fund IV	2022	Core Portfolio	40,000,000	3,856,000	-	3,368,659	0.87	n.m.
Franklin Templeton Private Real Estate Fund	2011	Non-Core Portfolio	30,000,000	36,316,408	49,259,605	291,089	1.36	19.1%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	10,000,000	12,200,112	21,350,157	2,306,245	1.94	18.4%
Blackstone Real Estate Partners Europe IV (USD)	2013	Non-Core Portfolio	32,500,000	32,593,831	41,250,701	5,252,035	1.43	11.4%
NYC Asset Investor #1	2013	Non-Core Portfolio	10,000,000	12,925,517	7,452,629	6,210,950	1.06	1.1%
NYC Asset Investor #3	2013	Non-Core Portfolio	8,000,000	5,834,243	1,610,266	5,295,343	1.18	3.1%
Carlyle Realty Partners VII	2014	Non-Core Portfolio	25,000,000	23,227,342	27,928,041	6,120,977	1.47	12.7%
H/2 Special Opportunities III	2014	Non-Core Portfolio	15,000,000	15,577,770	15,563,998	3,960,032	1.25	7.3%
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	16,500,000	18,844,760	19,487,262	12,594,351	1.70	16.4%
European Property Investors Special Opportunities 4	2015	Non-Core Portfolio	11,227,018	10,226,724	4,222,349	9,855,734	1.38	7.9%
PW Real Estate Fund III	2015	Non-Core Portfolio	11,203,575	8,751,528	21,504,174	4,149,793	2.93	30.7%
DivcoWest Fund V	2016	Non-Core Portfolio	10,000,000	7,975,361	2,918,909	6,949,976	1.24	5.8%
H/2 Special Opportunities IV	2016	Non-Core Portfolio	10,000,000	10,076,908	2,347,475	9,921,342	1.22	6.2%
Westbrook Real Estate Co-Investment Partnership X	2016	Non-Core Portfolio	10,000,000	9,720,224	8,524,559	3,420,877	1.23	9.3%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	10,000,000	11,016,407	10,430,640	7,458,186	1.62	18.0%
Exeter Industrial Value Fund IV	2017	Non-Core Portfolio	10,000,000	9,400,559	19,241,680	1,462,001	2.20	30.7%
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	9,198,190	7,685,879	4,030,003	2,649,524	0.87	-6.6%
NYCRS-KKR CMBS Retention Partners	2017	Non-Core Portfolio	13,000,001	12,094,048	5,059,232	10,552,024	1.29	6.7%
Pramerica Real Estate Capital VI	2017	Non-Core Portfolio	10,325,370	10,939,555	8,849,338	3,802,214	1.16	7.5%
Aermont Capital Real Estate Fund IV	2018	Non-Core Portfolio	9,839,522	7,112,528	-	5,879,864	0.83	-9.7%

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Brookfield Strategic Real Estate Partners III	2018	Non-Core Portfolio	12,000,000	10,813,237	2,811,738	11,580,801	1.33	13.3%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	10,000,000	10,454,328	12,779,201	3,326,956	1.54	24.4%
Blackstone Real Estate Partners IX	2019	Non-Core Portfolio	15,000,000	15,408,312	4,963,904	17,583,541	1.46	27.1%
Greenoak Asia (USD) III	2019	Non-Core Portfolio	10,000,000	10,401,412	5,736,565	5,359,826	1.07	8.9%
Westbrook Real Estate Fund XI	2019	Non-Core Portfolio	10,000,000	5,269,848	2,624,356	3,649,244	1.19	21.5%
DivcoWest Fund VI	2020	Non-Core Portfolio	10,000,000	5,064,846	163,275	4,777,912	0.98	-2.1%
Exeter Industrial Value Fund V	2020	Non-Core Portfolio	5,000,000	4,923,176	-	7,376,736	1.50	31.7%
KKR Real Estate Partners Europe II	2020	Non-Core Portfolio	9,950,000	6,984,543	1,984,114	5,445,990	1.06	5.6%
KKR Real Estate Securities Dislocation Opportunity Co-Investment	2020	Non-Core Portfolio	10,000,000	5,990,633	6,739,640	860,959	1.27	35.4%
Rialto Real Estate Fund IV - Debt	2020	Non-Core Portfolio	25,000,000	20,189,061	2,277,504	18,981,393	1.05	5.1%
Almanac Realty Securities IX	2021	Non-Core Portfolio	23,330,000	3,049,626	1,186	2,808,963	0.92	n.m.
Artemis Real Estate Partners Healthcare Fund II	2021	Non-Core Portfolio	15,000,000	2,881,651	771,682	1,855,588	0.91	n.m.
BIG Real Estate Fund II	2021	Non-Core Portfolio	25,000,000	11,726,488	3,501,543	8,747,201	1.04	n.m.
Brookfield Strategic Real Estate Partners IV	2021	Non-Core Portfolio	39,000,000	14,889,415	1,230,112	14,937,237	1.09	n.m.
KKR Real Estate Partners Americas III	2021	Non-Core Portfolio	35,000,000	21,152,698	1,562,516	18,856,171	0.97	n.m.
LaSalle GPS Co-investment Program - Non-Core	2021	Non-Core Portfolio	15,000,000	5,625,153	184,502	5,657,538	1.04	n.m.
Mesirow Financial Real Estate Value Fund IV	2021	Non-Core Portfolio	25,000,000	10,625,325	366,667	11,621,465	1.13	n.m.
Aermont Capital Real Estate Fund V	2022	Non-Core Portfolio	34,307,700	-	-	(425,830)	-	n.m.
Almanac Realty Securities IX (Sidecar II)	2022	Non-Core Portfolio	11,670,000	805,664	-	863,833	1.07	n.m.
Blackstone Real Estate Partners X	2023	Non-Core Portfolio	40,000,000	149,798	-	47,772	0.32	n.m.
EQT Exeter Industrial Value Fund VI	2023	Non-Core Portfolio	40,000,000	-	-	-	-	n.m.

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		682,869,146	306,706,831	129,915,416	280,688,740	1.34	12.23%
TOTAL INFRASTRUCTURE							
Brookfield Infrastructure Fund II	2013	10,000,000	10,112,253	10,491,582	8,563,742	1.88	12.87%
Global Energy & Power Infrastructure Fund II	2014	15,000,000	16,361,179	16,226,890	5,019,726	1.30	13.83%
IFM Global Infrastructure Fund	2014	15,000,000	20,027,335	9,102,969	29,957,687	1.95	11.71%
KKR Global Infrastructure Investors II	2014	19,000,000	20,702,336	29,367,943	8,891,822	1.85	18.05%
Actis Energy 4	2016	10,600,000	10,614,756	13,178,736	2,014,000	1.43	14.02%
ASF VII Infrastructure	2016	12,000,000	9,317,359	3,621,120	9,996,345	1.46	15.72%
Brookfield Infrastructure Fund III	2016	10,000,000	7,849,550	2,766,200	8,303,791	1.41	10.5%
Global Infrastructure Partners III	2016	12,000,000	12,266,959	5,712,356	12,480,131	1.48	10.38%
Axiom Infrastructure North America	2017	12,221,338	12,776,935	3,798,213	13,656,608	1.37	8.6%
EQT Infrastructure III	2017	9,214,756	10,613,949	14,542,266	5,141,571	1.85	20.86%
NYCRS EIG Energy Partners	2017	11,760,000	7,161,808	4,106,278	4,196,532	1.16	7.62%
Cardinal NR Sidecar Holdings	2018	1,880,001	1,892,698	625,014	2,960,819	1.89	17.49%
EQT Infrastructure IV - USD Fund	2018	18,000,000	16,655,736	3,021,050	18,541,961	1.29	11.55%
Global Infrastructure Partners IV	2018	22,600,000	17,396,584	188,139	18,428,370	1.07	5.90%
KKR Global Infrastructure Investors III	2018	15,600,000	13,900,906	3,544,601	12,284,995	1.14	6.42%
Ardian Infrastructure Fund V B	2019	14,737,491	9,678,444	375,251	11,549,929	1.23	15.89%
Brookfield Infrastructure Fund IV	2019	19,000,000	17,544,959	3,338,862	19,270,231	1.29	13.41%
Brookfield Infrastructure Fund IV (BIF IV): Co-Invest	2019	2,000,000	2,010,258	287,147	2,883,393	1.58	15.48%
Global Energy & Power Infrastructure Fund III F	2019	15,600,000	13,687,178	2,568,482	14,040,823	1.21	13.42%
Actis Energy 5	2020	27,000,000	3,657,487	-	1,649,000	0.45	n.m.
EQT Infrastructure IV Co-Investment (Saber)	2020	1,600,000	1,616,000	97,112	1,981,241	1.29	8.85%
EQT Infrastructure V	2020	32,000,000	22,023,368	1,591,360	22,328,729	1.09	n.m.
ASF VIII Infrastructure B	2021	40,000,000	4,655,297	822,029	4,313,597	1.10	n.m.
InfraVia European Fund V	2021	37,825,000	9,824,687	185,124	9,388,674	0.97	n.m.
KKR Global Infrastructure Investors IV	2021	35,000,000	14,697,804	185,486	13,040,175	0.90	n.m.
NYCRS EIG Energy Partners Co-Investment	2021	2,940,000	-	-	-	-	n.m.
Stonepeak Infrastructure Fund IV	2021	35,000,000	15,505,574	171,207	16,773,781	1.09	n.m.
Ardian Infra Fund V Co-Invest Lemon	2022	2,754,960	2,514,917	-	2,572,920	1.02	n.m.
Basalt Infrastructure Partners IV A	2022	45,000,000	-	-	-	0.00	n.m.
BlackRock Global Infrastructure Fund IV D	2022	25,000,000	1,640,515	-	1,405,212	0.86	n.m.

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
EQT Infrastructure VI	2022	32,000,000	-	-	-	0.00	n.m.
Brookfield Infrastructure Fund V-B	2023	45,000,000	-	-	(312,743)	0.00	n.m.
DIF Infrastructure VII	2023	45,535,600	-	-	(634,322)	0.00	n.m.
Global Infrastructure Partners V	2023	30,000,000	-	-	-	0.00	n.m.

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail



Through June 30, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		430,000,000	264,627,151	30,160,484	274,205,759	0.50%	10.58%
Apollo Centre Street Partnership, L.P.	2020	30,000,000	28,615,775	8,615,775	22,877,736	1.00%	7.46%
KKR-NYC Credit C L.P.	2020	30,000,000	21,110,689	1,062,372	21,138,884	0.00%	3.08%
Marathon Centre Street Partnership, L.P. - Asset Class	2020	20,000,000	23,020,000	6,420,000	22,371,655	0.50%	11.31%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitment	2020	10,000,000	7,750,000	-	5,262,031	0.21%	-16.84%
OHA Centre Street Partnership, L.P.	2020	30,000,000	30,000,000	-	52,221,062	1.25%	22.03%
400 Capital Centre Street LP	2021	40,000,000	36,898,804	-	38,946,218	0.00%	4.69%
Torchlight Debt Fund VII, LP	2021	30,000,000	16,518,342	1,518,342	16,475,754	0.76%	6.08%
Brightwood Capital Fund V, LP	2022	40,000,000	16,073,336	312,908	18,152,841	0.00%	11.05%
Centre Street CarVal Partnership LP	2022	40,000,000	10,000,000	-	10,611,217	1.84%	8.37%
ICG Centre Street Partnership, L.P.	2022	40,000,000	41,481,416	11,810,717	32,436,419	0.00%	9.84%
KLCP Domestic Fund III LP	2022	40,000,000	16,470,542	414,773	17,288,730	0.00%	10.03%
Crestline Opportunity Fund V Onshore T/STE, L.P.	2023	40,000,000	11,688,247	5,597	11,682,650		0.00%
Torchlight Debt Fund VIII, LP	2023	40,000,000	5,000,000	-	4,740,563	-0.71%	-26.05%

Information provided by Alpha Frontier
Above data is not final and subject to change



**New York City
Board of Education Retirement System**

Appendix D

Footnotes



Through June 30, 2023

General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment (Private Market) fees are recorded on a cash basis and are not inclusive of carried interest paid. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Returns greater than 1 year are annualized.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

Page Specific

Page 13 - 18 - Portfolio Asset Allocation

- Rebalancing Ranges: the minimum and maximum weights that actual Asset Allocation may reach before rebalancing between Asset Classes is necessary.

Pages 19 - 21 - Performance Attribution: Total Plan

- Plan Return at Policy Weights: the return of the Total Plan assuming actual Asset Class results were maintained at target (Adjusted Policy) weights. *Figure = (Return of Asset Class 1* Target Weight) plus (Return Of Asset Class 2* Target Weight) plus (.....)*
- **Allocation Effect** = Total Plan Return minus Plan Return At Adjusted Policy Weights. Allocation is the Contribution to Performance resulting from an overweight or underweight to an asset class. E.g. an underweight to an Asset Class that under-performs results in a positive Allocation Effect and vice versa.
- **Selection Effect** = Equal to the Custom Benchmark (Adjusted Policy Index) Return minus Plan Return at Adjusted Policy Weights. This illustrates how the Managers have added or removed value based on their Security Selection decisions, e.g., *If the manager's Actual Returns are higher than the Implied Return there will be a positive Selection Effect.*
- **Policy Index = Custom Benchmark**
The "policy index" is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program. Weights may reflect an adjustment of actual policy for outstanding commitments for new or revised programs, such as for private market programs, which are invested gradually, or for any new or updated program requiring the completion of RFPs and contracts. The policy index/custom benchmark is calculated monthly based on adjusted policy weights at the beginning of each month.



Through June 30, 2023

The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 30.65%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 8.94%*

*International Active – Global Equity: MSCI ACWI * 1.80%*

*Emerging Markets: MSCI Emerging Markets *5.56%*

*International Emerging Managers FOF: MSCI ACWI Ex US IMI Net * 0.88%*

*Private Equity: Russell 3000 + 300 b.p. per annum * 9.00%*

*Private Real Estate – Core: NFI - ODCE Net * 4.00%*

Private Real Estate – Non Core: NFI - ODCE Net + 200bps 3.01%*

*Infrastructure: CPI + 4% * 3.55%*

US Treasury Short Term: FTSE US Government Bond 1-3 Years Index 2.13%*

US Treasury Intermediate: USBIG TSY AGN 1-10 2.49%*

*Active Government: NYC Treasury Agency + 5 * 1.77%*

*US Treasury Long Duration: FTSE US Government Bond 10+ Years Index * 0.71%*

*Core FI-Developing Managers : Bloomberg U.S. Aggregate * 0.00%*

*Mortgage: Bloomberg US Mortgage Backed Securities * 4.73%*

*ETI: ETI Custom Benchmark * 0.48%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 5.10%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 8.89%*



Through June 30, 2023

*Bank Loans: Credit Suisse Leveraged Loan * 0.00%*

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.11%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.23%*

Page 22 – Allocation and Selection Effects - Asset Class Breakdown

- This chart aims to break down the Allocation and Selection Effects shown on the Performance Attribution pages. The aim of the Page is to show the asset classes where Managers are either out performing or underperforming their benchmark and to show the basis point effect that this is having on Plan performance.



Through June 30, 2023

[1] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.

[2] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.

[3] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.

ETI Quarterly Report (Public):

BERS - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	Bank of America		Citi Community Development		Carver Federal Savings Bank		The Community Preservation Corp		JP Morgan Chase		Low Income Investment Fund		NCB Capital Impact *		Neighborhood Housing Service		Wells Fargo		Local Initiatives Support Corp		Enterprise Cmty Loan Fund		NYC HDC	
Contractual Commitment	\$4.00		\$4.00		\$1.00		\$4.00		\$5.00		\$4.00		\$0.00		\$1.00		\$2.00		\$1.00		\$1.00		\$2.00	
Current Market Value	\$0.58		\$2.06		\$0.15		\$1.27		\$3.49		\$1.73		\$0.08		\$0.00		\$0.77		\$0.44		\$0.19		\$0.00	
Commitments Q2 (included in total)	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.24	75	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.00	6	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.01	28	0.00	0	0.78	207	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$0.01	34	\$0.00	0	\$1.02	282	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Delivered Q2 (included in total)																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.03	52	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.02	50	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.01	18	0.02	13	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.03	73	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$0.09	193	\$0.02	13	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Total Commitments																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.39	954	\$0.45	121	\$0.24	75	\$0.00	0	\$0.00	0	\$0.00	0	\$0.28	90	\$0.11	101	\$0.00	0
Brooklyn	0.00	0	0.11	0	0.00	0	0.10	215	0.00	0	0.18	95	0.00	0	0.00	0	0.00	0	0.09	74	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.16	561	0.13	84	0.95	289	0.00	0	0.00	0	0.00	0	0.24	113	0.05	26	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.05	120	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.16	253	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.11	0	\$0.00	0	\$0.86	2,103	\$0.58	205	\$1.38	459	\$0.00	0	\$0.00	0	\$0.00	0	\$0.60	277	\$0.16	127	\$0.00	0
Historical Investments																								
Bronx	\$0.26	60	\$1.37	802	\$0.00	0	\$0.55	2,030	\$2.99	1,733	\$0.51	178	\$0.00	0	\$0.00	0	\$0.11	90	\$0.11	48	\$0.00	0	\$0.00	0
Brooklyn	0.28	54	0.87	481	0.00	0	0.58	1,868	0.33	226	0.71	401	0.00	0	0.00	0	0.25	130	0.16	82	0.22	360	0.00	0
Manhattan	0.34	100	0.24	283	0.21	236	0.31	1,371	0.35	346	1.28	498	0.10	123	0.00	0	0.48	203	0.22	65	0.00	0	0.00	0
Queens	0.84	293	0.04	54	0.00	0	0.05	120	0.27	164	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.04	67	0.00	0	0.00	0	0.00	0
Outside of NYC	0.09	39	0.21	41	0.00	0	0.32	797	0.38	197	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$1.81	546	\$2.73	1,661	\$0.21	236	\$1.81	6,186	\$4.32	2,666	\$2.50	1,077	\$0.10	123	\$0.00	0	\$0.88	490	\$0.49	195	\$0.22	360	\$0.00	0

Note: Dollar amount listed in millions

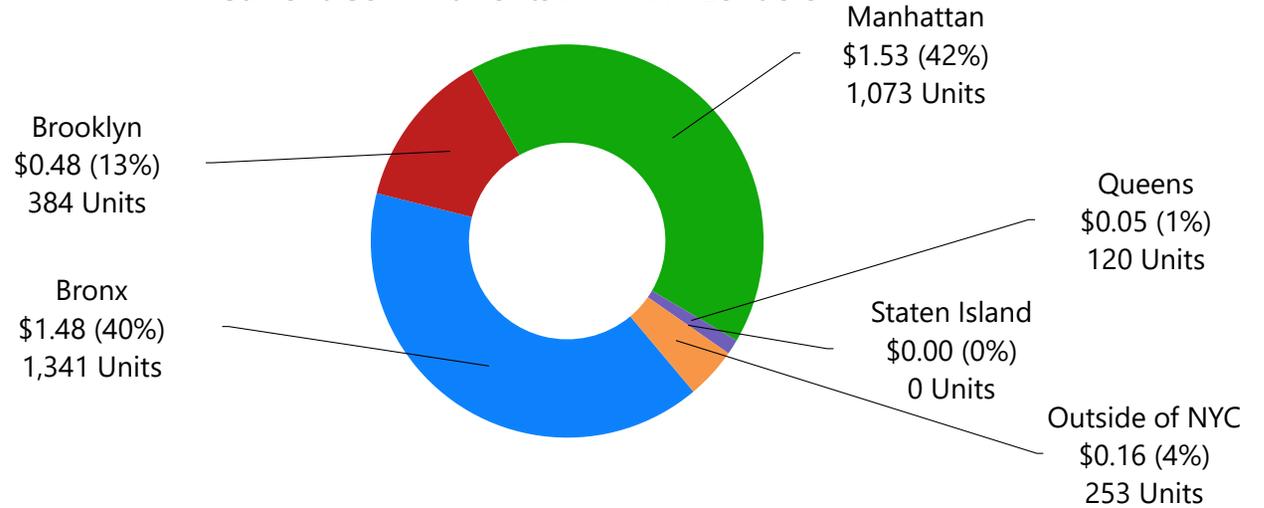
* NCB Capital Impact's Buy-Sell Agreement terminated effective 7/29/2014.

BERS - Economically Targeted Investments Quarterly Report

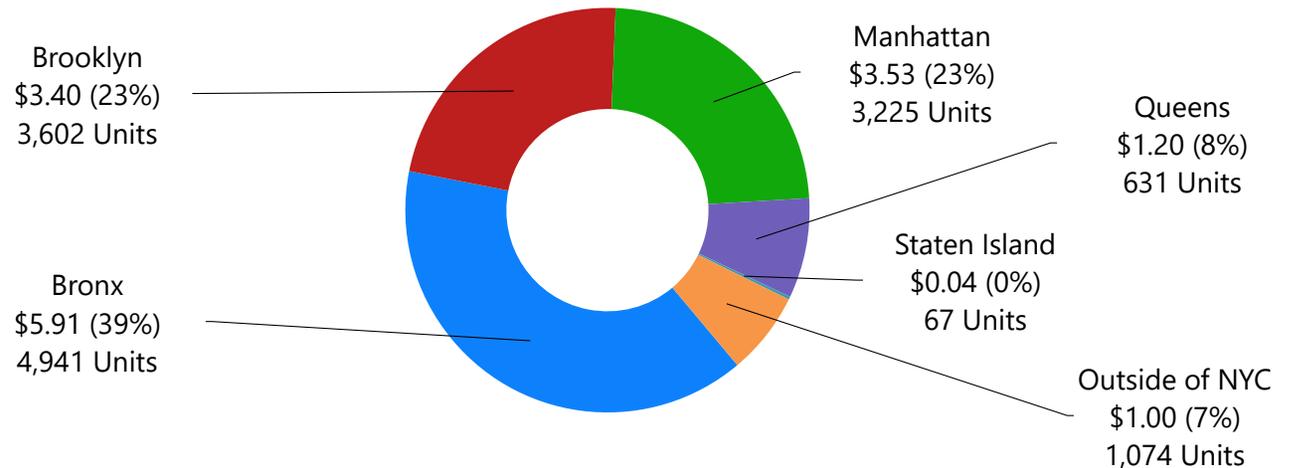
Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	All Lender Totals	
Contractual Commitment	\$29.00	
Current Market Value	\$10.75	
	Dollars	Units
Commitments Q2 (included in total)		
Bronx	\$0.24	75
Brooklyn	0.00	6
Manhattan	0.79	235
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.00	0
Total	\$1.03	316
Delivered Q2 (included in total)		
Bronx	\$0.03	52
Brooklyn	0.02	50
Manhattan	0.03	31
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.03	73
Total	\$0.11	206
Total Commitments		
Bronx	\$1.48	1,341
Brooklyn	0.48	384
Manhattan	1.53	1,073
Queens	0.05	120
Staten Island	0.00	0
Outside of NYC	0.16	253
Total	\$3.69	3,171
Historical Investments		
Bronx	\$5.91	4,941
Brooklyn	3.40	3,602
Manhattan	3.53	3,225
Queens	1.20	631
Staten Island	0.04	67
Outside of NYC	1.00	1,074
Total	\$15.07	13,540

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



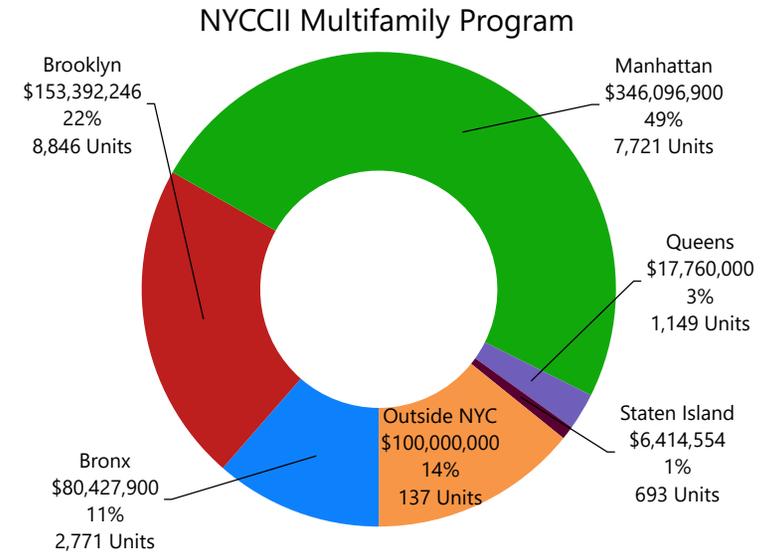
Note: Dollar amount listed in millions

BERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT) Market Value \$16.11 million¹

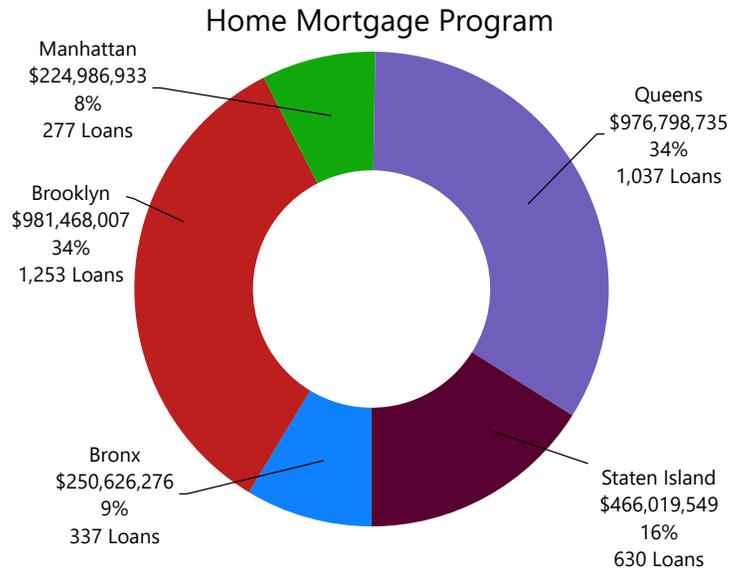
NYC Community Investment Initiative (NYCCII)

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	Investments	Units ²	Investments	Units ²	Investments	Units ²
Bronx	\$27,600,000	2,010	\$52,827,900	761	\$80,427,900	2,771
Brooklyn	49,501,800	3,230	103,890,446	5,616	153,392,246	8,846
Manhattan	172,021,700	6,908	174,075,200	813	346,096,900	7,721
Queens	0	0	17,760,000	1,149	17,760,000	1,149
Staten Island	0	0	6,414,554	693	6,414,554	693
Outside NYC	0	0	100,000,000	137	100,000,000	137
Total	\$249,123,500	12,148	\$454,968,100	9,169	\$704,091,600	21,317



HIT Home Mortgage Program

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	\$ Amount	Loans	\$ Amount	Loans	\$ Amount	Loans
Bronx	\$32,544,168	41	\$218,082,108	296	\$250,626,276	337
Brooklyn	116,575,736	138	864,892,271	1,115	981,468,007	1,253
Manhattan	10,742,253	12	214,244,680	265	224,986,933	277
Queens	82,399,317	64	894,399,418	973	976,798,735	1,037
Staten Island	106,039,089	191	359,980,460	439	466,019,549	630
Total	\$348,300,563	446	\$2,551,598,937	3,088	\$2,899,899,500	3,534



BERS Loans	Phase I: 0	Phase II: 13	Total: 13
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¹Interest is reinvested

²Low/Moderate Income Units

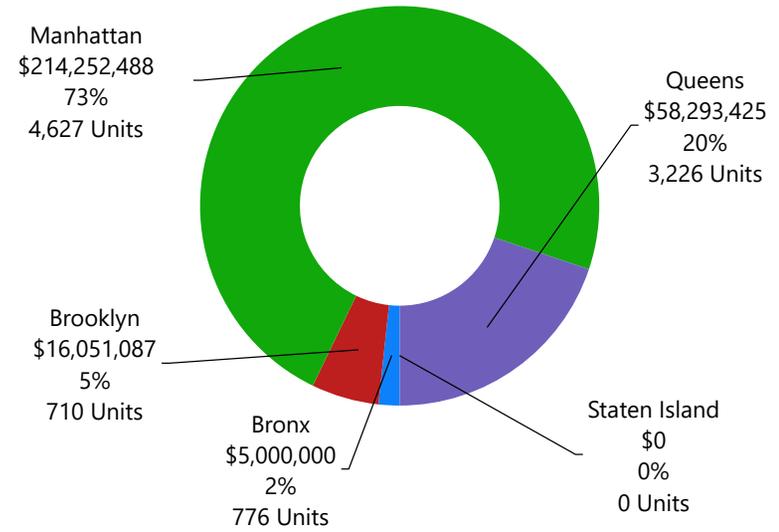
BERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)

NYC Workforce Housing Investments: 2009 - 2015

Borough	Investments	LMI Units
	Since Inception	Since Inception
Bronx	\$5,000,000	776
Brooklyn	16,051,087	710
Manhattan	214,252,488	4,627
Queens	58,293,425	3,226
Staten Island	0	0
Total	\$293,597,000	9,339

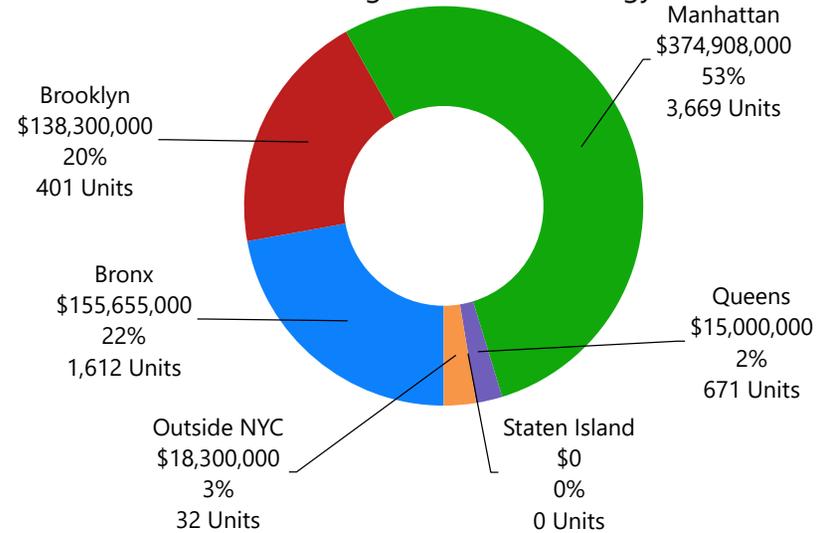
NYC Workforce Housing Investments



HIT Housing Investment Strategy: 2015 - Q2 2023

Borough	Q2 Investments	Investments	Q2	LMI Units
		Since Inception	Units	Since Inception
Bronx	\$0	\$155,655,000	0	1,612
Brooklyn	0	138,300,000	0	401
Manhattan	93,650,000	374,908,000	234	3,669
Queens	0	15,000,000	0	671
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$93,650,000	\$702,163,000	234	6,385

HIT Housing Investment Strategy



BERS - Economically Targeted Investments Quarterly Report

RBC ACCESS CAPITAL STRATEGIES (Since Inception 2/1/07)

\$10.5 million Allocated (2.34% of total account)
Market Value \$9.35 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q2	Total	Q2	Total
Bronx	\$23,985	\$3,335,527	180	20,149
Brooklyn	0	1,885,963	0	15,373
Manhattan	0	2,936,335	0	7,281
Queens	0	504,630	0	920
Staten Island	0	130,389	0	75
Total BERS Multifamily Investments	\$23,985	\$8,792,844	180	43,798
Multifamily Total All Systems	\$1,025,000	\$375,762,572	180	43,798

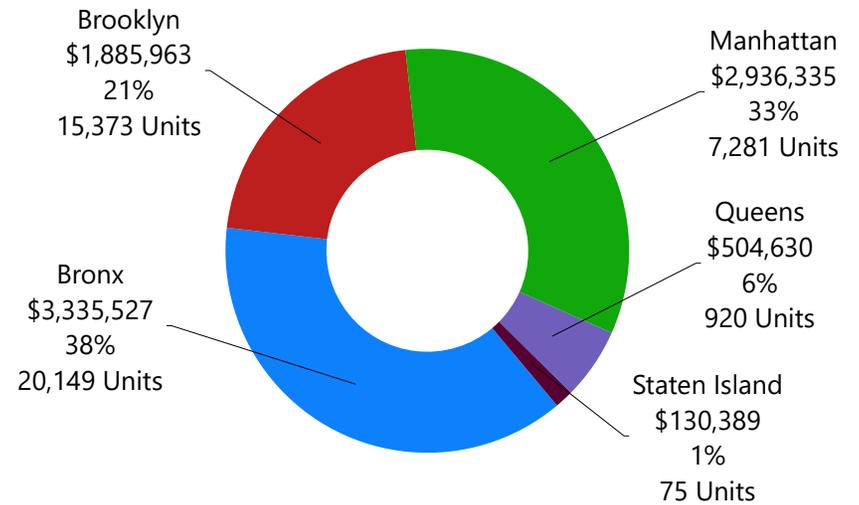
Single Family Investments Detail	\$ Invested		Units	
	Q2	Total	Q2	Total
Bronx	\$27,476	\$1,735,647	2	322
Brooklyn	31,131	4,341,273	3	731
Manhattan	0	381,429	0	65
Queens	82,421	6,697,727	7	1,052
Staten Island	98,755	4,492,784	10	709
Total BERS Single Family Investments	\$239,783	\$17,648,860	22	2,879
Single Family Total All Systems	\$10,247,120	\$754,224,803	22	2,879

Other Investments Detail	\$ Invested		Loans	
	Q2	Total	Q2	Total
Bronx	\$0	\$15,795	0	1
Brooklyn	0	126,135	0	8
Manhattan	0	56,930	0	5
Queens	0	12,716	0	3
Staten Island	0	0	0	0
Total BERS Other Investments	\$0	\$211,577	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

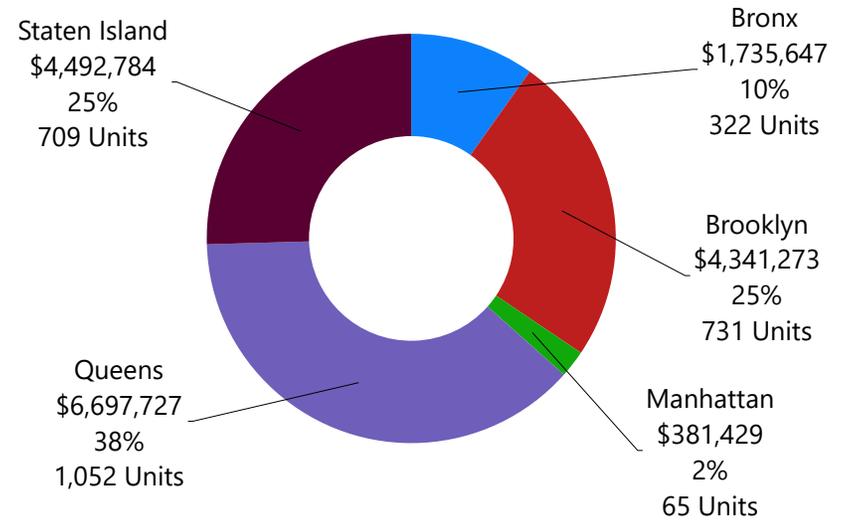
Grand Total BERS	\$263,768	\$26,653,281
Grand Total All Systems	\$11,272,120	\$1,139,029,115

¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.
² If not indicated otherwise, superintendent units are allocated based on building size.

RBC Access Multifamily Investments Since Inception



RBC Access Single Family Investments Since Inception



BERS - Economically Targeted Investments Quarterly Report

ETI Real Estate Equity Investments

Total Market Value \$18.32 million

Hudson Market Value \$5.31 million

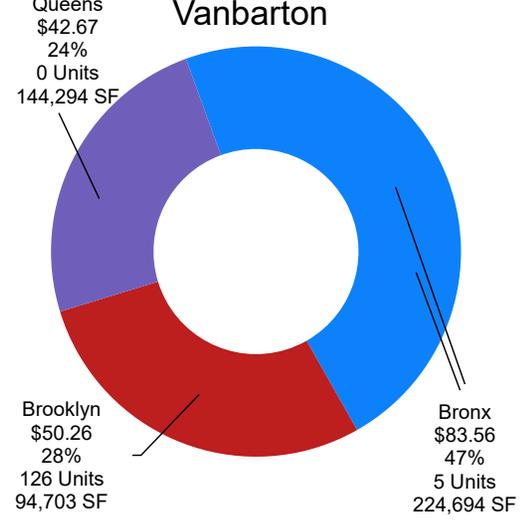
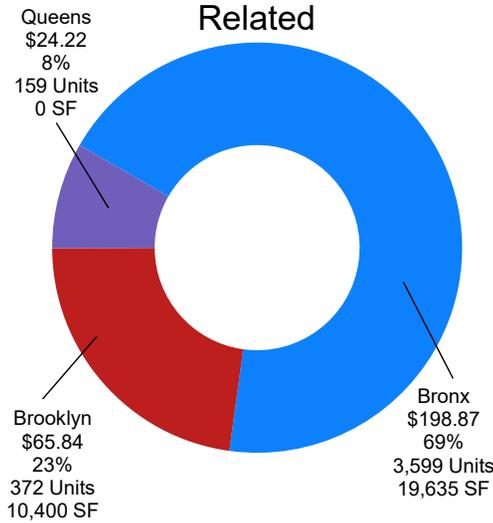
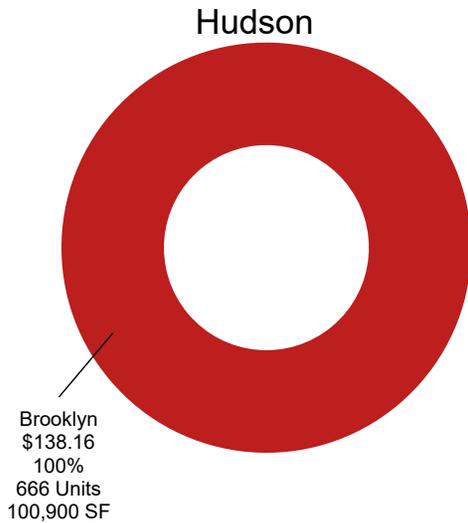
Borough	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$0.00	0	0	0
Brooklyn	138.16	666	666	100,900
Manhattan	0.00	0	0	0
Queens	0.00	0	0	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$138.16	666	666	100,900

Related Market Value \$6.81 million

Borough	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$198.87	3,599	3,356	19,635
Brooklyn	65.84	372	212	10,400
Manhattan	0.00	0	0	0
Queens	24.22	159	151	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$288.93	4,130	3,719	30,035

Vanbarton (Emmes) Market Value \$6.21 million

Borough	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$83.56	5	2	224,694
Brooklyn	50.26	126	61	94,703
Manhattan	0.00	0	0	0
Queens	42.67	0	0	144,294
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$176.49	131	63	463,691



*All information is derived from reports submitted by individual managers and State Street Bank, and is reported on a quarter lag. Performance has not been reviewed by consultants or custodial bank.

**Dollar amounts listed in millions.

Private Equity Quarterly Report (Public):

NYC Board of Education Retirement System

NYCBERS - PE

Portfolio Report

As Of March 2023

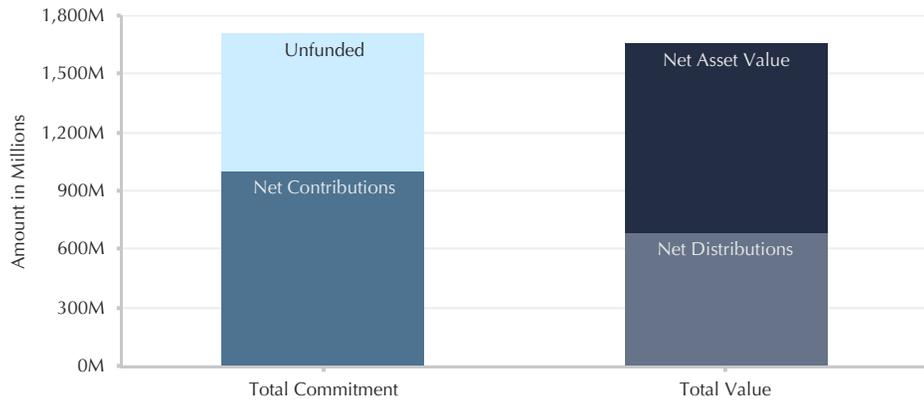
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Table Of Contents

Portfolio Snapshot	3
Portfolio Overview	4
Performance Review	5
Portfolio QoQ Overview	7
TVPI Distribution	8
Portfolio Summary	9
Portfolio Summary by Strategy	12
Period Chart Analysis	20
Portfolio IRR vs Benchmark PME+	21
Portfolio Quartile Analysis by Total Exposure	22

NYC Board of Education Retirement System

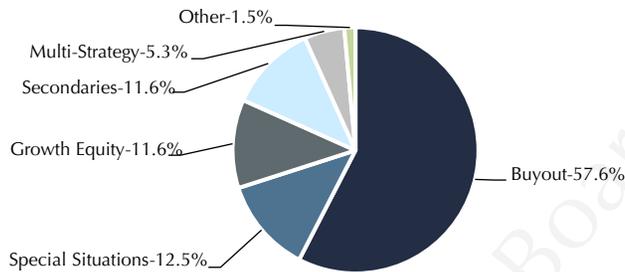
Summary



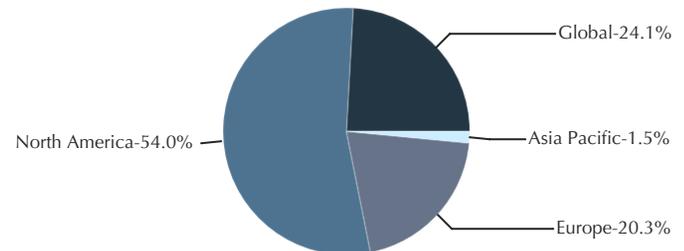
Portfolio Summary

Total Pension Assets	\$8.3 bn as of 03/31/2023				
GP Relationships	51				
Holdings	134				
# of New Investments within the quarter*	8				
# of Underlying Active Investments	1953				
% of Public Companies	6.5%				
Total Commitment Amount	\$1.7 bn				
Net Contributions	\$999.6 mm				
Net Distributions	\$680.9 mm				
Net Asset Value	\$978.5 mm				
Weighted Average Age	6.8Y				
Unfunded Commitment	\$706.5 mm				
Minimum Annual Pacing	250.0 mm				
Maximum Annual Pacing	420.0 mm				
Portfolio Allocation	11.8%				
Minimum Target Allocation	5.0%				
Maximum Target Allocation	13.0%				
1Y IRR	-0.8%	2Y IRR	13.1%	3Y IRR	24.3%
5Y IRR	17.5%	7Y IRR	17.2%	10Y IRR	16.7%
ITD IRR**	14.1%	ITD TVPI**	1.6x		

Total Exposure by Strategy



Total Exposure by Region



Position Analytics data based on GP provided information as of Mar-2023
 IRR not meaningful for investments held less than 24 months
 Weighted Average Age (WAA) is based on net contributions
 WAA is calculated as the sum of the individual net contributions divided by the overall net contribution and then multiplied by the age
 Total Exposure = Unfunded + NAV

Strategy Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Net IRR	TVPI
Buyout	79	5.4	533.3	895.7	436.9	970.2	507.5	273.1	17.9%	1.6x
Growth Equity	17	5.6	142.4	188.3	53.7	196.1	138.1	76.8	15.2%	1.6x
Multi-Strategy	5	13.3	57.1	194.0	32.0	89.1	163.1	236.1	10.3%	1.8x
Other	1	0.1	3.0	25.0	21.6	24.6	3.4	0.0	n.m.	0.9x
Secondaries	17	6.3	110.7	206.8	84.1	194.8	127.5	86.6	17.5%	1.5x
Special Situations	15	5.8	132.1	202.6	78.1	210.2	141.4	85.1	20.3%	1.5x
NYCBERS - PE	134	6.8	978.5	1,712.3	706.5	1,685.0	1,080.9	757.8	14.1%	1.6x

¹ IRR not meaningful for investments held less than 24 months

Investment Type Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Net IRR	TVPI
Direct Investments	102	7.1	880.7	1,509.2	593.5	1,474.1	990.0	724.4	14.0%	1.6x
Co-Investments	32	4.4	97.8	203.2	113.0	210.9	91.0	33.4	16.4%	1.4x
NYCBERS - PE	134	6.8	978.5	1,712.3	706.5	1,685.0	1,080.9	757.8	14.1%	1.6x

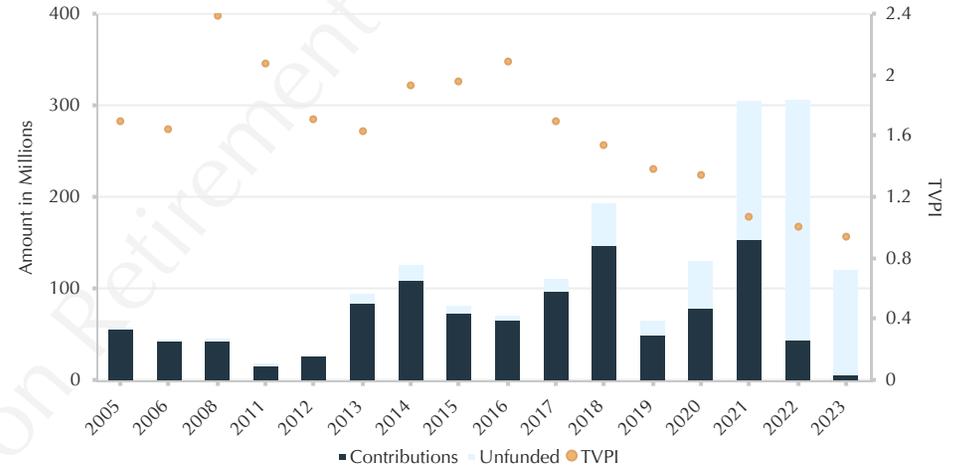
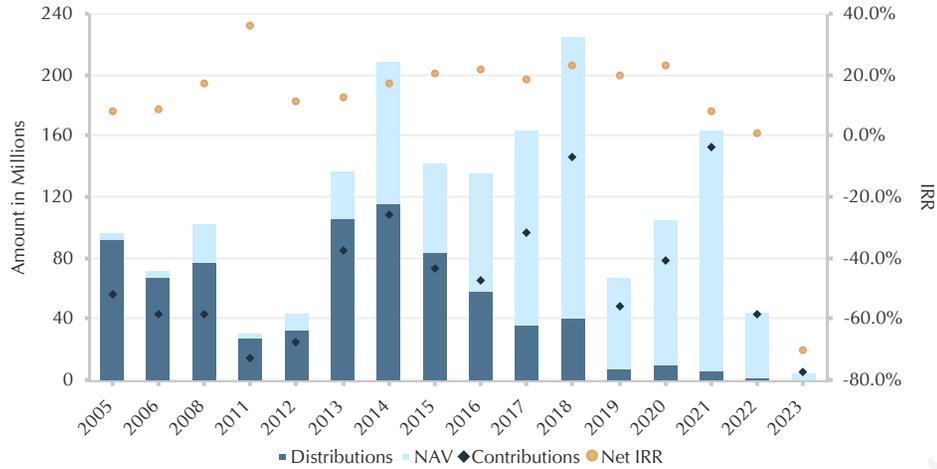
¹ IRR not meaningful for investments held less than 24 months

Total Exposure = Unfunded + NAV

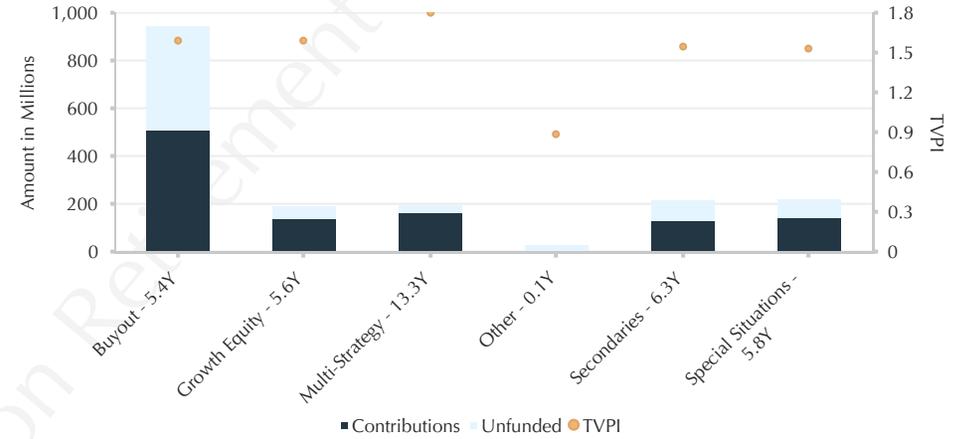
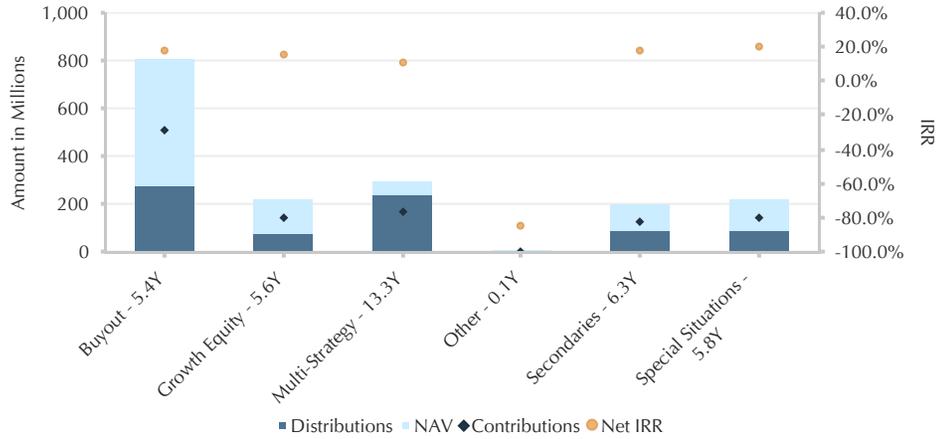
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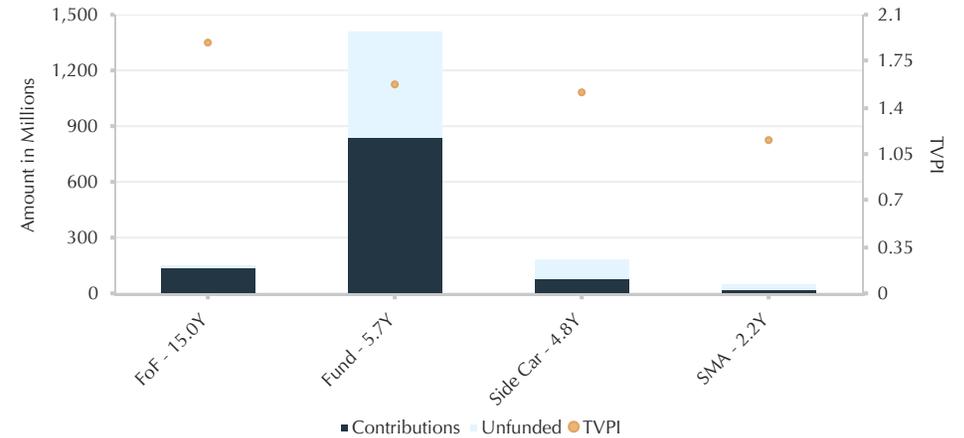
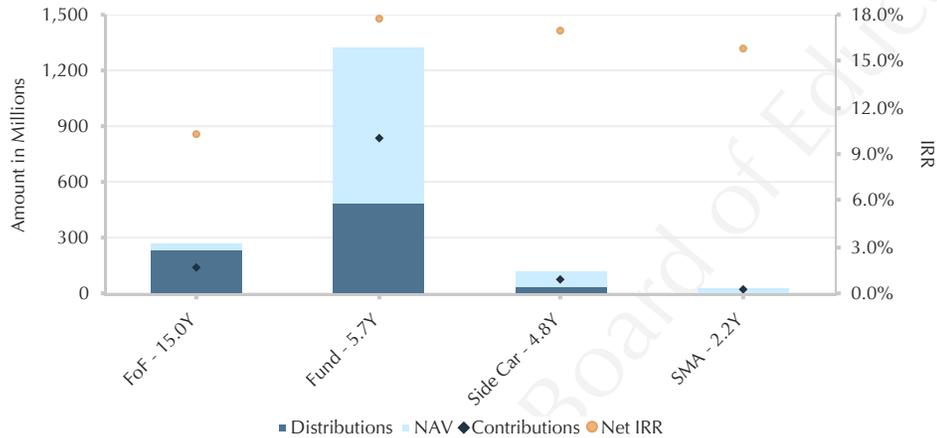
Performance Review by Vintage Year



Performance Review by Strategy



Performance Review by Structure

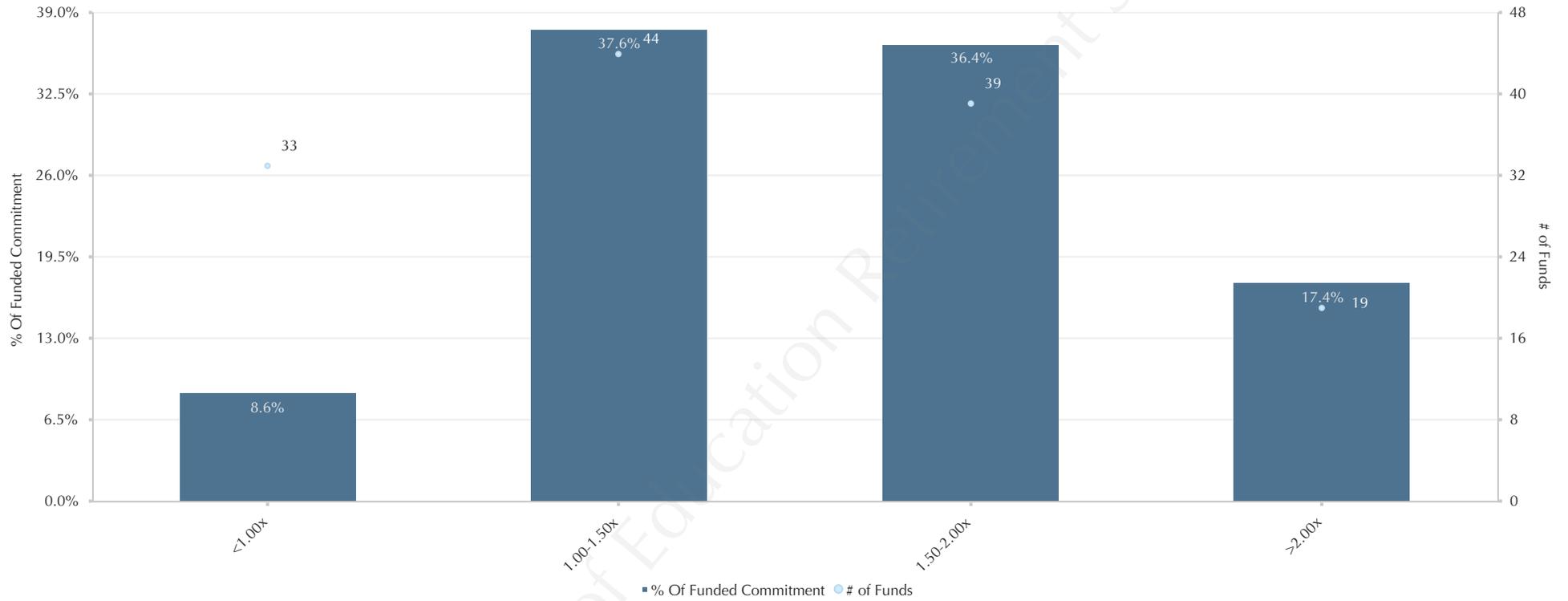


Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Statistics

As Of Mar-2023	Mar-2022	Jun-2022	Sep-2022	Dec-2022	Mar-2023	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Mar-2023 Active	Mar-2023 Liquidated
Committed Capital	1,408.1	1,539.2	1,570.1	1,599.6	1,712.3	7.0%	7.0%	21.6%	1,693.3	19.0
Unfunded Commitment	579.2	658.6	642.5	625.7	706.5	12.9%	12.9%	22.0%	706.5	0.0
Net Contributed Capital	822.4	870.9	912.9	966.1	999.6	3.5%	3.5%	21.5%	980.6	19.0
Net Distributed Capital	589.1	611.5	639.7	662.7	680.9	2.8%	2.8%	15.6%	657.7	23.2
Recallable Capital	65.3	70.3	71.7	73.5	76.8	4.5%	4.5%	17.7%	75.5	1.4
Net Asset Value	898.8	891.6	889.7	939.3	978.5	4.2%	4.2%	8.9%	978.5	0.0
Net Gain/Loss	663.0	628.9	612.7	631.5	655.3	3.8%	3.8%	-1.2%	649.7	5.6
Total Value	1,487.9	1,503.1	1,529.3	1,602.0	1,659.4	3.6%	3.6%	11.5%	1,636.2	23.2
Total Exposure (mm)	1,477.9	1,550.3	1,532.1	1,565.0	1,685.0	7.7%	7.7%	14.0%	1,685.0	0.0
DPI	0.7x	0.7x	0.7x	0.7x	0.7x	0.0x	0.0x	0.0x	0.7x	1.3x
Total Value to Paid-In (TVPI)	1.7x	1.7x	1.6x	1.6x	1.6x	0.0x	0.0x	-0.1x	1.6x	1.3x
Net Internal Rate of Return (IRR)	15.7%	14.9%	14.4%	14.2%	14.1%	-0.1%	-0.1%	-1.6%	14.6%	4.9%

TVPI Distribution



Strategy	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Buyout	54.5%	895.7	507.5	273.1	436.9	970.2	298.9	533.3	17.9%	1.6x
Growth Equity	14.5%	188.3	138.1	76.8	53.7	196.1	81.1	142.4	15.2%	1.6x
Multi-Strategy	5.8%	194.0	163.1	236.1	32.0	89.1	130.2	57.1	10.3%	1.8x
Other	0.3%	25.0	3.4	0.0	21.6	24.6	-0.4	3.0	n.m. ¹	0.9x
Secondaries	11.3%	206.8	127.5	86.6	84.1	194.8	69.8	110.7	17.5%	1.5x
Special Situations	13.5%	202.6	141.4	85.1	78.1	210.2	75.7	132.1	20.3%	1.5x
NYCBERS - PE	100.0%	1,712.3	1,080.9	757.8	706.5	1,685.0	655.3	978.5	14.1%	1.6x

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	0.5%	119.8	4.8	0.0	115.2	119.7	-0.3	4.5	n.m. ¹	0.9x
2022	4.4%	303.9	43.3	0.9	262.9	305.6	0.3	42.7	n.m. ¹	1.0x
2021	16.1%	302.2	152.9	6.0	152.1	309.8	10.8	157.8	n.m. ¹	1.1x
2020	9.7%	124.7	77.8	9.5	52.1	147.3	26.9	95.2	22.8%	1.3x
2019	6.1%	63.3	48.4	7.0	15.4	75.4	18.6	60.0	19.5%	1.4x
2018	18.8%	180.9	146.0	40.2	46.6	230.8	78.4	184.2	22.8%	1.5x
2017	13.1%	101.2	96.0	35.6	13.7	141.4	67.4	127.8	18.4%	1.7x
2016	7.9%	59.4	64.7	57.9	4.9	82.0	70.3	77.0	21.4%	2.1x
2015	6.0%	75.2	72.6	83.3	8.6	67.3	69.4	58.7	20.6%	2.0x
2014	9.5%	106.3	107.9	115.4	17.3	110.1	100.4	92.9	17.1%	1.9x
2013	3.2%	89.4	84.2	105.7	9.9	41.0	52.6	31.1	12.7%	1.6x
2012	1.1%	25.0	25.4	32.7	0.0	10.7	18.0	10.7	11.6%	1.7x
2011	0.3%	15.0	14.7	27.6	3.2	6.0	15.7	2.8	35.8%	2.1x
2008	2.6%	45.0	42.8	77.0	2.7	27.7	59.3	25.0	16.9%	2.4x
2006	0.4%	44.0	43.3	67.3	0.9	5.0	28.1	4.1	8.6%	1.6x
2005	0.4%	57.0	56.2	91.6	1.1	5.2	39.5	4.1	8.3%	1.7x
NYCBERS - PE	100.0%	1,712.3	1,080.9	757.8	706.5	1,685.0	655.3	978.5	14.1%	1.6x

	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Structure										
FoF	3.4%	146.0	142.3	236.0	4.7	37.9	126.9	33.2	10.3%	1.9x
Fund	85.4%	1,338.2	839.3	488.2	572.1	1,407.9	484.8	835.8	17.7%	1.6x
Side Car	8.7%	180.2	78.6	33.4	102.4	187.9	40.3	85.6	17.0%	1.5x
SMA	2.4%	48.0	20.7	0.1	27.3	51.2	3.3	23.9	n.m. ¹	1.2x
NYCBERS - PE	100.0%	1,712.3	1,080.9	757.8	706.5	1,685.0	655.3	978.5	14.1%	1.6x
Region										
Asia Pacific	0.9%	25.0	9.0	0.07	16.4	25.6	0.2	9.2	n.m. ¹	1.0x
Europe	20.2%	322.3	190.6	110.0	144.7	342.8	117.5	198.0	19.4%	1.6x
Global	21.2%	405.0	210.5	123.2	199.5	406.6	119.7	207.0	16.6%	1.6x
North America	57.7%	960.0	670.8	524.5	345.8	910.1	417.9	564.2	13.1%	1.6x
NYCBERS - PE	100.0%	1,712.3	1,080.9	757.8	706.5	1,685.0	655.3	978.5	14.1%	1.6x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Buyout											
American Securities Partners VII	USD	1.1%	8.0	7.8	4.1	0.7	11.6	7.2	10.9	16.1%	1.9x
Apax IX	USD	1.3%	13.0	14.0	15.7	1.2	13.9	14.3	12.7	23.2%	2.0x
Apax X	USD	1.2%	12.5	10.1	0.8	3.2	14.9	2.4	11.6	19.8%	1.2x
Apax XI	USD	0.0%	25.0	0.0	0.0	25.0	24.8	-0.2	-0.2	n.m.	0.0x
BC European Capital X	USD	1.4%	11.1	10.8	1.9	1.1	15.1	5.1	14.0	10.6%	1.5x
BCEC X Metro Co-Investment	USD	0.7%	4.4	4.6	1.5	0.00	7.1	4.0	7.1	15.7%	1.9x
Bridgepoint Europe V	USD	0.5%	8.9	8.1	11.2	0.7	5.5	7.8	4.8	18.5%	2.0x
Bridgepoint Europe V Co-Invest	USD	0.2%	3.0	2.7	5.5	0.2	1.9	4.5	1.6	27.1%	2.7x
Bridgepoint Europe VI	USD	1.6%	15.4	11.8	1.2	2.3	17.9	5.1	15.6	18.8%	1.4x
Bridgepoint Europe VI Co-Invest	USD	0.4%	3.8	2.7	0.0	0.8	5.2	1.6	4.3	19.9%	1.6x
Bridgepoint Europe VII A	USD	0.0%	17.5	0.0	0.0	17.9	17.6	-0.3	-0.3	n.m.	0.0x
Bridgepoint Europe VII Co-Invest	USD	-	8.8	0.0	0.0	8.9	8.9	0.0	0.0 ¹	n.m.	0.0x
Carlyle Partners VI	USD	1.0%	20.0	21.7	32.1	1.1	10.4	19.7	9.3	15.1%	1.9x
Carlyle Partners VI - Side Car	USD	0.1%	2.2	1.6	2.0	0.03	1.2	1.6	1.2	12.3%	2.0x
Crestview IV Co-Invest	USD	0.2%	2.7	1.5	0.5	1.7	3.7	1.1	2.1	57.0%	1.7x
Crestview Partners III	USD	1.3%	15.0	14.0	8.4	4.6	17.5	7.3	12.9	11.9%	1.5x
Crestview Partners III (Co-Investment B)	USD	0.6%	5.0	5.2	0.3	0.0	6.1	1.2	6.1	3.8%	1.2x
Crestview Partners IV	USD	0.6%	8.0	4.5	1.3	4.8	10.2	2.3	5.5	41.4%	1.5x
CVC Capital Partners VI	USD	1.8%	20.0	19.9	21.7	1.4	19.2	19.6	17.8	17.0%	2.0x
CVC Capital Partners VII	USD	2.8%	19.1	18.6	4.9	1.6	28.9	13.6	27.3	23.3%	1.7x
CVC Capital Partners VIII	USD	1.6%	25.5	14.3	0.08	10.6	25.9	1.2	15.4	n.m. ²	1.1x
EQT IX	USD	2.1%	19.6	19.3	1.9	2.1	23.2	3.7	21.0	14.0%	1.2x

Reporting Period: As Of Mar-2023

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Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
EQT IX (Co-Invest)	USD	0.6%	5.4	5.3	0.09	0.1	5.6	0.3	5.5	n.m. ²	1.0x
EQT VII	USD	1.0%	17.7	19.8	28.4	1.6	11.2	18.3	9.7	22.5%	1.9x
EQT VIII	USD	1.4%	14.1	13.4	9.6	1.8	15.9	10.2	14.1	26.9%	1.8x
EQT VIII (Co-Invest)	USD	0.6%	4.9	4.7	3.5	0.0	5.9	4.7	5.9	36.7%	2.0x
EQT X	USD	0.0%	18.8	0.3	0.3	18.8	18.6	-0.2	-0.2	n.m. ²	0.5x
EQT X (Co-Invest)	USD	0.1%	6.3	1.1	0.0	5.1	6.3	-0.01	1.1	n.m. ²	1.0x
Grain Communications Opportunity Fund II	USD	1.4%	11.9	9.0	0.1	3.0	16.9	5.0	13.8	22.5%	1.6x
Grain Communications Opportunity Fund III	USD	0.2%	3.0	1.9	0.01	1.1	2.9	-0.1	1.7	n.m. ²	0.9x
Green Equity Investors IX	USD	0.0%	19.9	0.0	0.0	19.9	19.8	-0.04	-0.04	n.m.	0.0x
Green Equity Investors IX Co-Invest	USD	-	6.6	0.0	0.0	6.6	6.6	0.0	0.0 ¹	n.m.	0.0x
Green Equity Investors VII	USD	1.3%	10.0	9.6	7.9	2.5	14.9	10.7	12.4	22.6%	2.1x
Heartwood Partners III	USD	0.2%	2.8	2.3	1.1	0.5	2.8	1.2	2.3	18.1%	1.5x
Hg Genesis 10	USD	0.0%	11.4	0.2	0.0	11.7	11.8	-0.01	0.1	n.m. ²	0.9x
Hg NYC Co-Invest	USD	0.2%	4.2	1.4	0.0	2.8	4.3	0.2	1.5	n.m. ²	1.1x
Hg Saturn 3	USD	0.0%	8.3	0.08	0.0	8.2	8.4	0.1	0.2	n.m. ²	2.2x
ICV Partners IV	USD	0.3%	3.0	3.0	1.2	0.2	3.1	1.2	3.0 ¹	23.1%	1.4x
Insight Partners XII Buyout Annex Fund	USD	0.4%	6.3	4.0	0.0	2.3	5.9	-0.3	3.6	n.m. ²	0.9x
Integrum Capital Partners	USD	0.0%	2.8	0.2	0.5	2.8	2.9	0.4	0.10	n.m. ²	3.2x
Integrum NYC Co-Invest	USD	-	1.7	0.0	0.0	1.7	1.7	0.0	0.0 ¹	n.m.	0.0x
KKR Americas Fund XII	USD	2.1%	16.0	15.5	6.8	1.8	22.0	11.5	20.2	20.8%	1.7x
KKR Americas Fund XIII	USD	1.0%	31.0	10.4	0.0	20.6	30.5	-0.5	9.8	n.m. ²	0.9x
KKR Asian Fund IV	USD	0.9%	25.0	9.0	0.07	16.4	25.6	0.2	9.2	n.m. ²	1.0x
KKR European Fund V (USD)	USD	0.9%	10.0	8.6	1.7	1.7	10.4	1.8	8.8	10.7%	1.2x
KKR European Fund VI	USD	0.0%	25.0	0.0	0.0	25.0	24.6	-0.4	-0.4	n.m.	0.0x

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Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Lindsay Goldberg V	USD	0.6%	10.5	5.2	1.4	5.4	11.2	2.0	5.8	26.4%	1.4x
Mill City Fund II	USD	0.1%	1.2	1.4	0.7	0.03	0.8	0.1	0.8	1.3%	1.1x
NMS Fund II	USD	0.1%	1.2	1.3	1.2	0.2	0.8	0.6	0.6	9.8%	1.5x
NMS Fund III	USD	0.3%	2.0	1.6	0.6	0.7	3.1	1.4	2.5	24.5%	1.9x
Nordic Capital XI	USD	0.0%	14.1	0.0	0.0	14.5	14.4	-0.2	-0.2	n.m.	0.0x
Nordic N11 Co-Investment	USD	-	5.9	0.0	0.0	6.4	6.4	0.0	0.0 ¹	n.m.	0.0x
One Rock Capital Partners III	USD	2.2%	25.0	18.6	2.6	8.9	30.2	5.3	21.3	n.m. ²	1.3x
Palladium Equity Partners V	USD	0.7%	10.0	6.4	1.8	4.1	10.7	2.0	6.6	10.3%	1.3x
Patriot Financial Partners II	USD	0.1%	3.5	3.7	4.9	0.1	1.1	2.2	1.0	12.3%	1.6x
Patriot Financial Partners III	USD	0.3%	2.5	2.3	0.1	0.2	3.1	0.7	2.9	7.9%	1.3x
Permira VIII	USD	0.3%	23.7	3.5	0.0	19.2	22.6	-0.1	3.3	n.m. ²	1.0x
Reverence Capital Partners Opportunities Fund II	USD	0.4%	3.0	2.4	0.4	0.7	5.0	2.3	4.3	30.1%	1.9x
Reverence Capital Partners Opportunities Fund II (Parallel)	USD	0.3%	1.5	1.2	0.2	0.4	3.0	1.6	2.6	40.9%	2.4x
Reverence Capital Partners Opportunities Fund V (FOO) (PE Fund III)	USD	0.1%	7.0	1.4	0.01	5.6	7.0	0.01	1.4	n.m. ²	1.0x
Reverence Capital Partners Opportunities Fund V (PE Fund III)	USD	0.4%	18.0	4.0	0.03	14.0	17.6	-0.3	3.7	n.m. ²	0.9x
Siris Partners III	USD	0.3%	3.5	3.6	2.7	0.5	3.2	1.8	2.7	11.8%	1.5x
Siris Partners IV	USD	1.2%	10.0	8.3	1.2	2.4	14.2	4.7	11.8	18.8%	1.6x
Thoma Bravo XV	USD	1.1%	20.3	10.9	0.00	9.4	20.2	-0.06	10.8	n.m. ²	1.0x
Thoma Bravo XV Co-Invest	USD	0.4%	6.8	3.5	0.0	3.2	6.7	-0.08	3.5	n.m. ²	1.0x
TPG Rise Climate	USD	0.3%	8.3	2.3	0.04	6.1	8.7	0.4	2.6	n.m. ²	1.2x
TPG Rise Climate Co-Invest	USD	0.6%	16.7	4.2	0.0	12.5	18.4	1.8	5.9	n.m. ²	1.4x
Vista Co-Invest Fund 2022-4	USD	0.1%	6.8	1.4	0.0	5.4	6.8	0.00	1.4	n.m. ²	1.0x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Vista Equity Partners Fund V	USD	3.4%	25.0	31.2	36.6	5.1	38.3	38.6	33.2	19.6%	2.2x
Vista Equity Partners Fund VI	USD	2.5%	16.0	20.0	16.8	1.7	26.0	21.1	24.3	19.6%	2.1x
Vista Equity Partners Fund VII	USD	2.2%	20.5	18.4	2.0	4.0	25.5	5.0	21.5	10.7%	1.3x
Vista Equity Partners Fund VIII	USD	0.2%	20.3	2.7	0.0	17.5	19.9	-0.3	2.4	n.m. ²	0.9x
Vistria Fund III	USD	0.4%	3.0	2.6	0.0	0.4	3.9	0.9	3.6	15.7%	1.3x
Vistria Fund IV	USD	1.0%	13.0	9.6	0.2	3.6	13.4	0.4	9.9	n.m. ²	1.0x
WCAS XIII	USD	0.9%	10.0	8.3	3.3	1.4	9.9	3.5	8.5	26.1%	1.4x
Webster Capital III	USD	0.0%	2.3	2.5	6.0	0.01	0.2	3.7	0.2	21.9%	2.5x
Welsh, Carson, Anderson & Stowe XII	USD	1.0%	10.0	9.5	14.0	0.0	9.4	13.9	9.4	27.0%	2.5x
Welsh, Carson, Anderson & Stowe XIV	USD	0.2%	30.0	2.7	0.0	27.3	29.1	-0.9	1.8	n.m. ²	0.7x
Welsh, Carson, Anderson & Stowe XIV N Co-Invest	USD	-	10.0	0.0	0.0	10.0	10.0	0.0	0.0 ³	n.m.	0.0x
Total Buyout	USD	54.5%	895.7	507.5	273.1	436.9	970.2	298.9	533.3	17.9%	1.6x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Growth Equity											
FTV V	USD	0.8%	3.5	4.0	3.4	0.0	7.4	6.8	7.4	31.6%	2.7x
FTV VI	USD	0.6%	3.5	3.4	0.4	0.2	5.6	2.4	5.5	31.0%	1.7x
FTV VII	USD	0.9%	23.8	9.1	0.0	14.8	23.7	-0.1	8.9	n.m. ²	1.0x
FTV VII Co-Invest	USD	0.2%	5.4	1.6	0.0	3.8	5.4	0.00	1.6	n.m. ²	1.0x
Insight Partners XII	USD	1.1%	18.8	13.0	0.02	5.7	16.9	-1.8	11.2	n.m. ²	0.9x
PSG V	USD	1.0%	23.0	9.9	0.7	13.9	23.4	0.4	9.5 ³	n.m. ²	1.0x
Raine Partners II	USD	0.3%	3.0	3.0	5.8	0.4	3.6	6.1	3.3	26.9%	3.0x
Raine Partners III	USD	1.0%	8.5	8.9	0.5	0.09	9.7	1.2	9.6	6.1%	1.1x
Raine Partners IV	USD	0.0%	5.3	0.0	0.0	5.3	5.2	-0.2	-0.2	n.m.	0.0x
Valor Equity Partners III	USD	0.3%	3.5	3.5	4.9	0.02	2.6	3.9	2.6	14.1%	2.1x
Valor Equity Partners IV	USD	1.0%	4.5	4.3	0.4	0.2	9.8	5.7	9.6	21.8%	2.3x
Valor Equity Partners V	USD	0.4%	3.5	2.9	0.01	0.6	4.6	1.1	4.0	20.4%	1.4x
Valor Equity Partners VI	USD	0.1%	7.5	1.3	0.0	6.2	7.3	-0.2	1.1	n.m. ²	0.9x
Warburg Pincus Financial Sector	USD	1.9%	13.0	13.1	5.0	0.5	19.2	10.6	18.7	21.6%	1.8x
Warburg Pincus Global Growth	USD	1.8%	15.0	13.1	0.1	1.8	19.9	5.1	18.1	15.1%	1.4x
Warburg Pincus Private Equity XI	USD	1.1%	25.0	25.4	32.7	0.0	10.7	18.0	10.7	11.6%	1.7x
Warburg Pincus Private Equity XII	USD	2.1%	21.5	21.6	22.8	0.3	21.1	22.0	20.8	18.1%	2.0x
Total Growth Equity	USD	14.5%	188.3	138.1	76.8	53.7	196.1	81.1	142.4	15.2%	1.6x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Multi-Strategy											
HarbourVest Centre Street Co-Investment Fund	USD	1.3%	23.0	12.3	0.0	10.7	22.9	-0.07	12.3 ¹	n.m. ²	1.0x
Mesirow Financial Private Equity Partnership Fund III	USD	0.4%	57.0	56.2	91.6	1.1	5.2	39.5	4.1	8.3%	1.7x
Mesirow Financial Private Equity Partnership Fund IV	USD	0.4%	25.0	24.3	42.8	0.9	5.0	22.5	4.1	11.0%	1.9x
Mesirow Financial Private Equity Partnership Fund V	USD	2.6%	45.0	42.8	77.0	2.7	27.7	59.3	25.0	16.9%	2.4x
NYC-Northbound Emerging Managers Program	USD	1.2%	25.0	8.4	0.1	16.6	28.3	3.4	11.7	n.m. ²	1.4x
Liquidated Holdings (1)	USD	-	19.0	19.0	24.6	0.0	0.0	5.6		4.9%	1.3x
Total Multi-Strategy	USD	5.8%	194.0	163.1	236.1	32.0	89.1	130.2	57.1	10.3%	1.8x
Other											
Base10 Advancement Initiative II	USD	0.3%	25.0	3.4	0.0	21.6	24.6	-0.4	3.0	n.m. ²	0.9x
Total Other	USD	0.3%	25.0	3.4	0.0	21.6	24.6	-0.4	3.0	n.m.²	0.9x

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Secondaries											
ASF VI B	USD	0.2%	15.0	12.4	16.0	2.1	4.3	5.8	2.2	12.2%	1.5x
ASF VI B NYC Co-Invest	USD	0.1%	5.0	4.3	5.3	0.7	1.9	2.2	1.2	12.4%	1.5x
ASF VII B	USD	0.6%	10.0	6.7	5.1	3.1	9.0	4.3	5.9	16.8%	1.6x
ASF VII B NYC Co-Invest	USD	0.3%	6.0	4.2	4.0	1.8	5.2	3.2	3.4	18.9%	1.8x
ASF VIII B	USD	1.4%	21.0	11.1	2.7	9.9	23.9	5.6	13.9	25.3%	1.5x
ASF VIII B NYC Co-Invest	USD	0.6%	10.5	4.4	0.9	6.1	12.2	2.6	6.1	39.3%	1.6x
ICG Strategic Equity Co-Investment Fund III	USD	0.4%	4.4	3.3	2.0	1.2	5.0	2.5	3.8 ³	34.5%	1.8x
ICG Strategic Equity Co-Investment Fund IV	USD	0.9%	10.0	8.3	0.0	1.7	10.9	0.9	9.2 ³	n.m. ²	1.1x
ICG Strategic Equity Fund III	USD	1.5%	13.3	9.6	3.4	4.6	19.3	8.5	14.7 ¹	38.6%	1.9x
ICG Strategic Equity Fund IV	USD	1.4%	20.0	10.8	1.4	9.8	23.5	4.2	13.7 ¹	n.m. ²	1.4x
Landmark - NYC Fund I	USD	0.3%	6.0	5.5	6.6	0.5	3.7	4.2	3.2 ¹	15.6%	1.8x
Landmark Equity Partners XV	USD	0.4%	19.0	15.3	17.7	3.7	7.8	6.4	4.0 ¹	11.9%	1.4x
Lexington Capital Partners IX	USD	1.2%	12.4	9.9	2.7	3.5	15.5	4.7	11.9	30.9%	1.5x
Lexington Capital Partners VIII	USD	1.3%	20.0	18.2	18.1	4.3	16.6	12.2	12.3	16.7%	1.7x
Lexington Capital Partners X	USD	0.1%	22.5	0.0	0.0	22.5	23.2	0.7	0.7	n.m.	0.0x
Lexington Capital Partners X Co-Invest	USD	0.2%	7.5	1.5	0.0	6.0	7.8	0.3	1.8	n.m. ²	1.2x
Lexington IX Co-Invest	USD	0.3%	4.1	2.0	0.8	2.4	5.0	1.4	2.6	37.9%	1.7x
Total Secondaries	USD	11.3%	206.8	127.5	86.6	84.1	194.8	69.8	110.7	17.5%	1.5x

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Special Situations											
Apollo Fund X NYC Sidecar Co-Invest	USD	-	6.8	0.0	0.0	6.8	6.8	0.0	0.0 ¹	n.m.	0.0x
Apollo Investment Fund IX	USD	3.1%	32.0	27.8	10.0	10.3	41.0	12.9	30.8	25.0%	1.5x
Apollo Investment Fund VIII	USD	0.8%	20.0	19.6	21.7	2.1	9.6	9.5	7.4	10.0%	1.5x
Apollo Investment Fund X	USD	0.0%	20.3	0.0	0.0	20.3	19.9	-0.3	-0.3	n.m.	0.0x
Ares Corporate Opportunities Fund V	USD	1.1%	10.0	10.8	5.0	0.9	11.5	4.7	10.6	11.6%	1.4x
Centerbridge Capital Partners III	USD	0.2%	2.5	3.3	3.1	0.2	2.6	2.3	2.4	18.6%	1.7x
Clearlake Capital Partners VI	USD	1.5%	10.0	10.1	0.8	0.3	15.3	5.8	15.0	28.9%	1.6x
Clearlake Capital Partners VII	USD	1.6%	30.0	15.4	0.00	14.6	30.6	0.6	16.0	n.m. ²	1.0x
LightBay Investment Partners II	USD	0.0%	4.5	0.4	0.0	4.1	4.4	-0.07	0.3	n.m. ²	0.8x
Platinum Equity Capital Partners III	USD	0.3%	15.0	14.7	27.6	3.2	6.0	15.7	2.8	35.8%	2.1x
Platinum Equity Capital Partners IV	USD	1.3%	11.5	11.5	10.9	1.1	14.2	12.4	13.1	25.0%	2.1x
Platinum Equity Capital Partners IV Co-Investment	USD	0.1%	1.1	1.1	0.2	0.0	1.4	0.6	1.4 ³	11.0%	1.5x
Platinum Equity Small Cap Fund	USD	1.3%	10.0	7.4	1.8	3.4	15.8	6.8	12.4	30.4%	1.9x
Stellex Capital Partners	USD	0.4%	4.0	3.9	3.1	1.1	5.5	3.6	4.4	24.4%	1.9x
Stellex Capital Partners II	USD	1.6%	25.0	15.5	0.9	9.8	25.5	1.2	15.7	n.m. ²	1.1x
Total Special Situations	USD	13.5%	202.6	141.4	85.1	78.1	210.2	75.7	132.1	20.3%	1.5x
NYCBERS - PE	USD	100.0%	1,712.3	1,080.9	757.8	706.5	1,685.0	655.3	978.5	14.1%	1.6x

¹ Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.

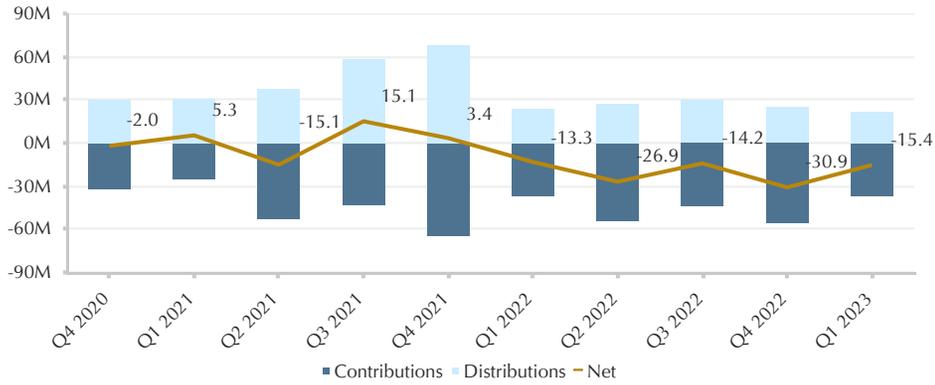
² IRR not meaningful for investments held less than 24 months

³ NAV is not up-to-date: Welsh, Carson, Anderson & Stowe XIV N Co-Invest as of Sep-2022, PSG V as of Dec-2022, ICG Strategic Equity Co-Investment Fund III as of Dec-2022, ICG Strategic Equity Co-Investment Fund IV as of Dec-2022, Platinum Equity Capital Partners IV Co-Investment as of Dec-2022

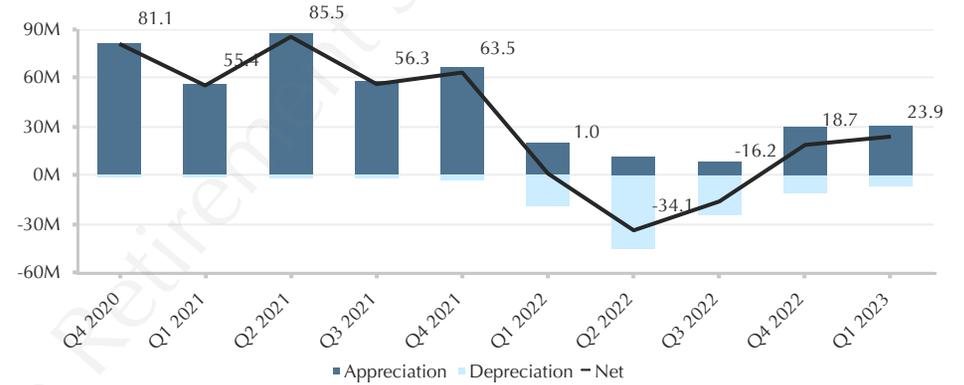
* Total figures take into account all current and closed portfolio positions as at Mar-2023

Total Exposure = Unfunded + NAV

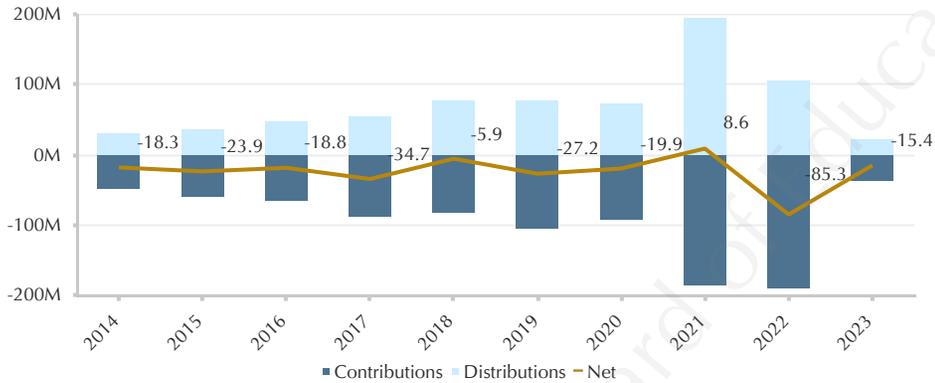
Cash Flows Quarterly



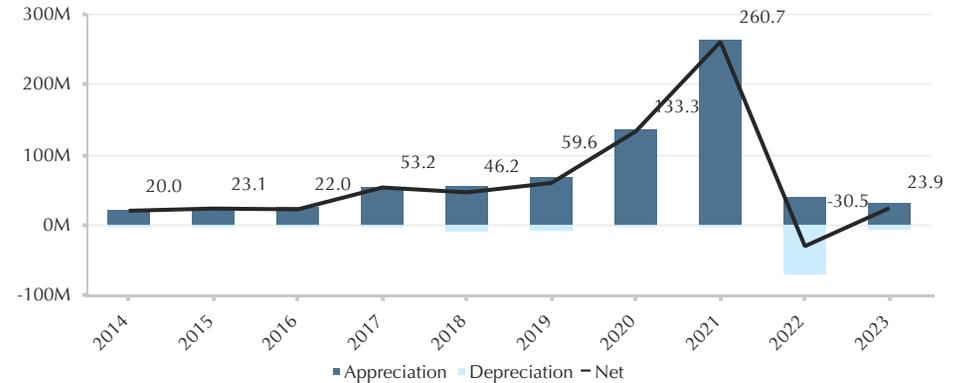
Appreciation/Depreciation Quarterly



Cash Flows Yearly



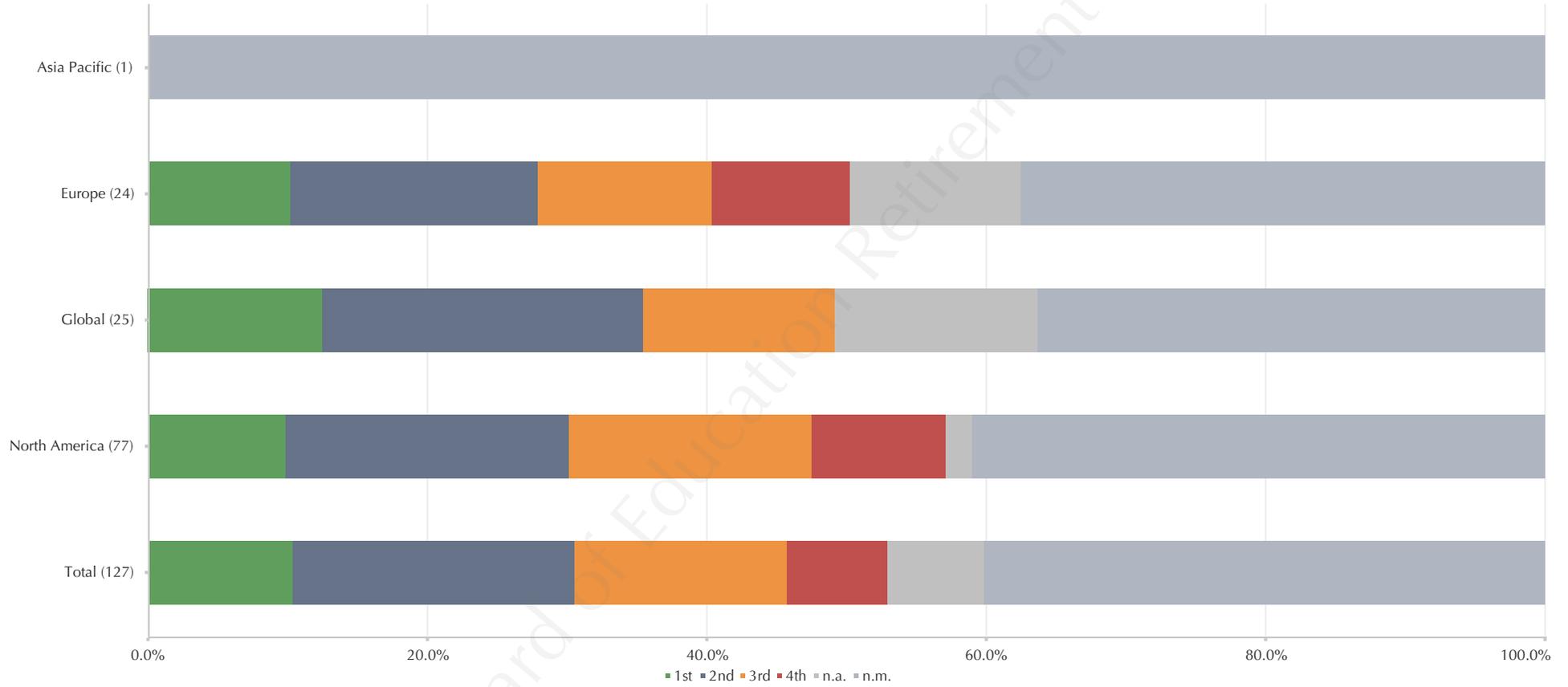
Appreciation/Depreciation Yearly



Portfolio IRR vs Benchmark PME+

PERFORMANCE VERSUS BENCHMARKS						
3/31/2023	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	2.5%	-0.8%	24.3%	17.5%	16.7%	14.1%
Russell 3000 PME+	7.2%	-7.1%	16.7%	10.0%	11.1%	10.6%
<i>Difference</i>	-4.7%	6.3%	7.6%	7.4%	5.5%	3.5%
Russell 3000 +300bps PME+	8.0%	-4.6%	21.1%	13.6%	14.8%	13.9%
<i>Difference</i>	-5.5%	3.8%	3.2%	3.8%	1.9%	0.2%
12/31/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	2.1%	-3.3%	19.8%	17.5%	16.8%	14.2%
Cambridge Associates	0.5%	-8.8%	19.8%	18.1%	16.8%	13.1%
<i>Difference</i>	1.6%	5.5%	0.0%	-0.6%	0.0%	1.1%

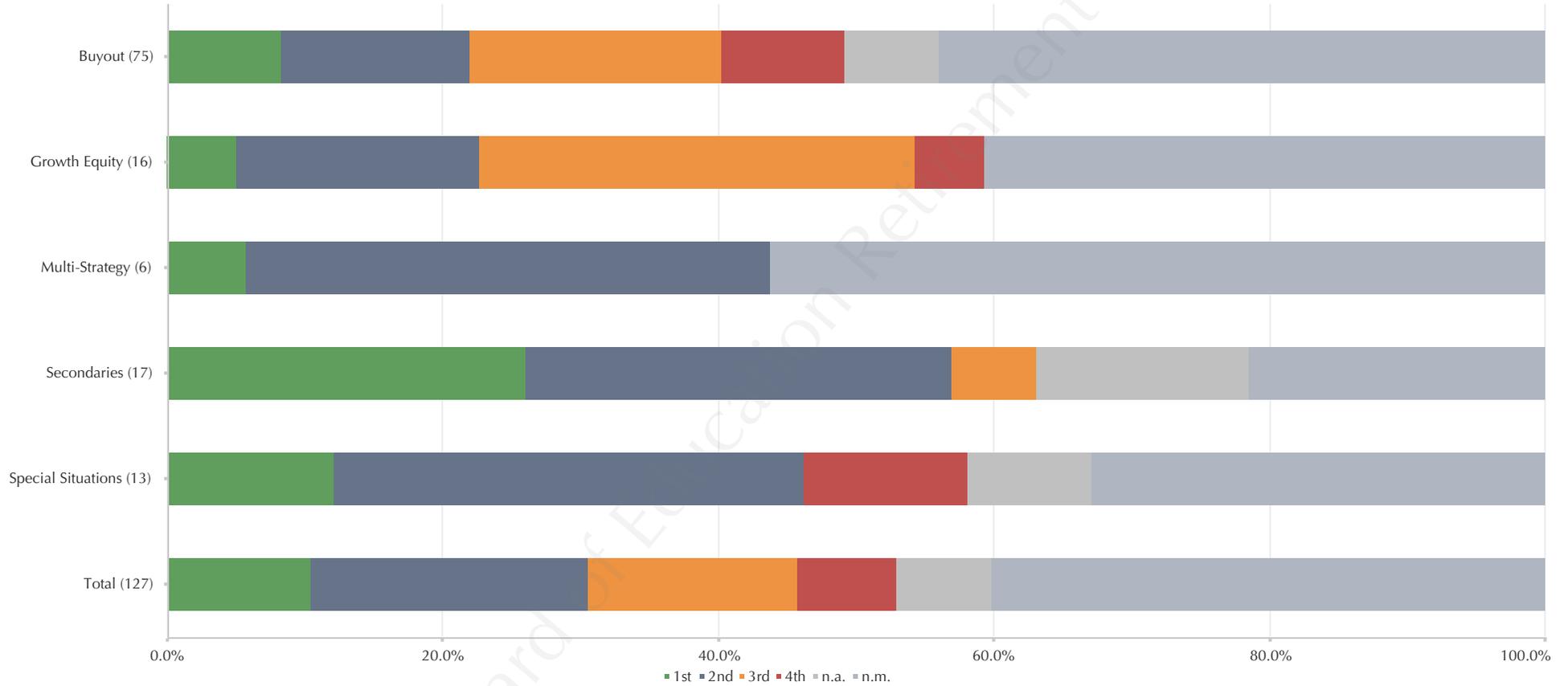
By Region



n.m. : IRR is not meaningful
 n.a. :Not available Benchmark data

CA benchmark data is not available for Q1 2023, data is presented as of Q4 2022

By Strategy



n.m. : IRR is not meaningful
 n.a. :Not available Benchmark data

CA benchmark data is not available for Q1 2023, data is presented as of Q4 2022

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Real Estate Quarterly Report (Public):

NYC Board of Education Retirement System

NYCBERS - RE

Public Report

As Of March 2023

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**Board of Education
Retirement System**

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Real Estate Overview

Tailwinds	Headwinds
<ul style="list-style-type: none"> In our view, the industrial sector fundamentals remain strong, stemming from a secular trend toward more e-commerce, supply chain reconfiguration and “near-shoring” impacts, which have been accelerated by the pandemic. We observed that overall performance of market-rate multifamily assets remains steady in most markets, buoyed by higher mortgage rates. Though concerns are emerging about how much higher rental rate increases consumers can absorb evidenced by recent upticks in vacancy rates and slower rental rate growth. Hotel occupancy and RevPAR for leisure assets has recovered meaningfully as leisure travel is normalizing post COVID-related travel restrictions. Though hospitality’s correlation to economic conditions are cause for concern. 	<ul style="list-style-type: none"> We believe that global supply chain issues have also driven up the cost of material inputs, resulting in rising construction costs and delayed project timelines. <p>From market observations we concluded that:</p> <ul style="list-style-type: none"> Increases in interest have resulted in higher cost of debt for many real estate owners, leading to higher yield-requirements (cap rates) for investors as well as non-accretive leverage at deal origination. Debt available for new acquisitions is limited as many traditional lenders pull back due to DSCR / debt yield thresholds and higher capital requirements. Heightened interest rates and broader recessionary concerns are leading to re-trades and wider bid-ask spreads in property markets, which is resulting in reduced transaction volumes. Office leasing continues to be focused primarily on “trophy” properties as the flight to quality trend persists amongst tenants. Recent pullbacks in expansion plans / increase in sublease activity from large tech companies are cause for concern.

Performance at a Glance

- The NCREIF Open End Diversified Core (“ODCE”) and NCREIF Property Index (“NPI”) reported Q1 2023 gross returns of -3.17% and -1.81%, respectively.^{1,2}
- Transaction volumes during Q1 2023 were down substantially year-over-year. The NPI reported 82 property transactions during the quarter, a 30% decline from Q1 2022 (116). Transactions during the quarter were distributed across property types, with retail (29) taking the lead and the other following, industrial (20), apartment (18), office (15).²
- Most property sectors produced negative returns during the quarter according to NPI, with hotels and retail as the only positive sectors. Office was the lowest performance property sector again, as capital markets have shunned the sector due to poor operating fundamentals.²
- The ODCE index reported the second consecutive quarter of negative appreciation during Q1 2023 (-4.00%), with a consistently-positive income return of 0.84%. The overall appreciation return for the trailing 1-year is -6.27%.¹

Figure 1: Gross Quarterly Returns | %

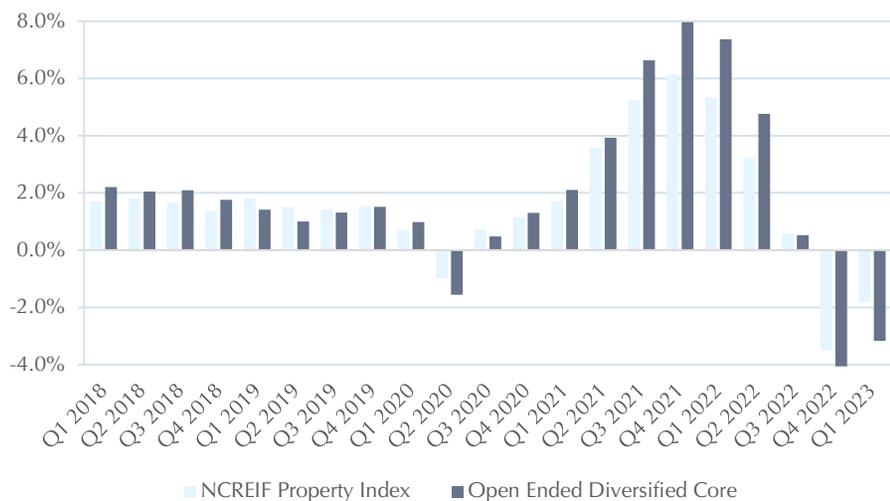
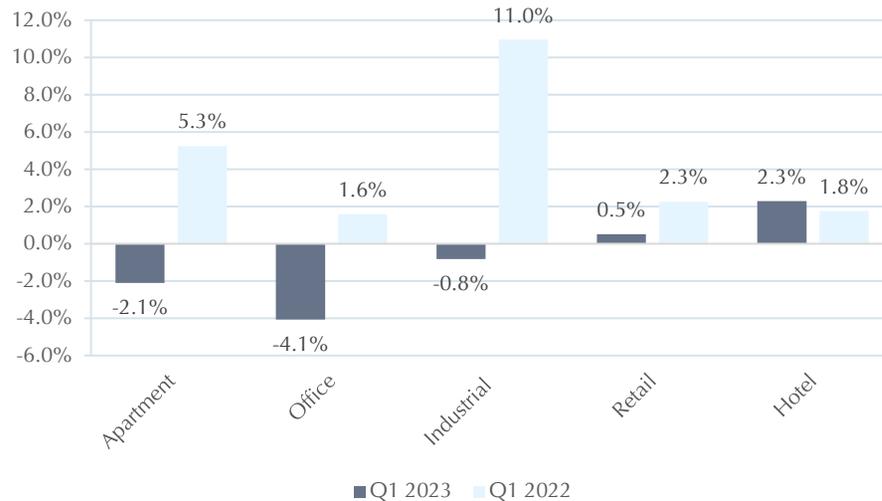


Figure 2: Property Index Returns by Component | %



SOURCES:

¹ NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES ("NCREIF") OPEN-ENDED DIVERSIFIED CORE EQUITY INDEX ("ODCE").

WWW.NCREIF.ORG

² NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES ("NCREIF") PROPERTY INDEX ("NPI"). WWW.NCREIF.ORG



Summary



Portfolio Summary

Total Pension Assets	\$8.3 bn as of 03/31/2023				
GP Relationships	33				
Holdings	62				
# of Underlying Active Investments	2963				
% of Public Companies	0.4%				
Total Commitment Amount	\$1.1 bn				
Net Contributions	\$760.0 mm				
Net Distributions	\$426.9 mm				
Net Asset Value	\$724.0 mm				
Weighted Average Age	6.2Y				
Unfunded Commitment	\$366.9 mm				
Minimum Annual Pacing	200.0 mm				
Maximum Annual Pacing	200.0 mm				
Portfolio Allocation	8.8%				
Minimum Target Allocation	6.0%				
Maximum Target Allocation	10.0%				
1Y IRR	-2.0%	2Y IRR	12.2%	3Y IRR	11.2%
5Y IRR	8.7%	7Y IRR	9.5%	10Y IRR	10.4%
ITD IRR*	10.3%	ITD TVPI*	1.4x		

* Dec-2010 - Mar-2023

PERFORMANCE VERSUS BENCHMARKS

3/31/2023	1 QUARTER	1 YEAR	3 YEAR	5 YEAR	INCEPTION
Total Real Estate TWRR	-1.8%	-1.3%	13.9%	9.8%	11.6%
NFI-ODCE +100 bps	-3.1%	-3.0%	8.5%	7.6%	10.4%
<i>Difference</i>	1.3%	1.6%	5.4%	2.2%	1.2%
Core / Core-Plus Real Estate TWRR	-2.7%	-1.2%	10.2%	7.8%	9.9%
NFI-ODCE	-3.4%	-3.9%	7.5%	6.6%	9.3%
<i>Difference</i>	0.7%	2.7%	2.7%	1.3%	0.5%
Non-Core Real Estate TWRR	-0.1%	-1.3%	19.9%	12.9%	10.5%
NFI-ODCE +200 bps	-2.9%	-2.0%	9.6%	8.7%	11.5%
<i>Difference</i>	2.8%	0.7%	10.3%	4.2%	-1.0%

IRR not meaningful for investments held less than 24 months
Weighted Average Age (WAA) is based on contributions



Performance Statistics

As Of Mar-2023	Mar-2022	Jun-2022	Sep-2022	Dec-2022	Mar-2023	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Mar-2023 Active	Mar-2023 Liquidated
Committed Capital	995.3	1,090.3	1,130.3	1,130.3	1,128.5	-0.2%	-0.2%	13.4%	1,128.5	-
Unfunded Commitment	384.9	456.7	391.6	383.2	366.9	-4.2%	-4.2%	-4.7%	366.9	-
Net Contributed Capital	609.9	630.8	733.1	745.0	760.0	2.0%	2.0%	24.6%	760.0	-
Net Distributed Capital	364.6	383.8	394.8	418.6	426.9	2.0%	2.0%	17.1%	426.9	-
Recallable Capital	45.9	49.3	52.5	53.7	55.4	3.1%	3.1%	20.5%	55.4	-
Net Asset Value	639.5	655.7	754.1	727.5	724.0	-0.5%	-0.5%	13.2%	724.0	-
Net Gain/Loss	344.3	356.3	360.4	343.1	330.0	-3.8%	-3.8%	-4.2%	330.0	-
Total Value	1,004.1	1,039.4	1,148.9	1,146.1	1,150.9	0.4%	0.4%	14.6%	1,150.9	-
Total Exposure (mm)	1,024.4	1,112.3	1,145.7	1,110.7	1,091.0	-1.8%	-1.8%	6.5%	1,091.0	-
DPI	0.6x	0.6x	0.5x	0.6x	0.6x	0.0x	0.0x	0.0x	0.6x	-
Total Value to Paid-In (TVPI)	1.5x	1.5x	1.4x	1.4x	1.4x	0.0x	0.0x	-0.1x	1.4x	-
Net Internal Rate of Return (IRR)	12.3%	12.2%	11.8%	11.0%	10.3%	-0.7%	-0.7%	-2.0%	10.3%	-

Total Exposure = Unfunded + NAV

Reporting Period: As Of Mar-2023

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Region	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Asia Pacific	0.7%	10.0	10.4	5.7	3.4	8.8	0.7	5.4	8.9%	1.1x
Europe	4.7%	119.4	76.6	77.8	51.4	85.4	35.2	34.0	12.9%	1.5x
Global	12.9%	255.2	175.7	133.8	100.9	194.3	51.5	93.4	14.7%	1.3x
North America	81.7%	743.9	613.6	264.9	211.2	802.5	242.6	591.3	9.4%	1.4x
NYCBERS – RE	100.0%	1,128.5	876.3	482.2	366.9	1,091.0	330.0	724.0	10.3%	1.4x

Strategy

Core / Core-plus	65.2%	446.4	447.4	163.5	52.5	524.5	188.1	472.0	9.1%	1.4x
Non-Core	34.8%	682.1	428.9	318.7	314.4	566.5	141.9	252.0	12.6%	1.3x
NYCBERS – RE	100.0%	1,128.5	876.3	482.2	366.9	1,091.0	330.0	724.0	10.3%	1.4x

Note: The portfolio allocation is based on the fund's strategy. Current portfolio exposure is generally in line with targets, and Aksia is continually working with Staff to strategically add new investments.

¹ IRR not meaningful for investments held less than 24 months

* Total figures take into account all current and closed portfolio positions Jun-2022

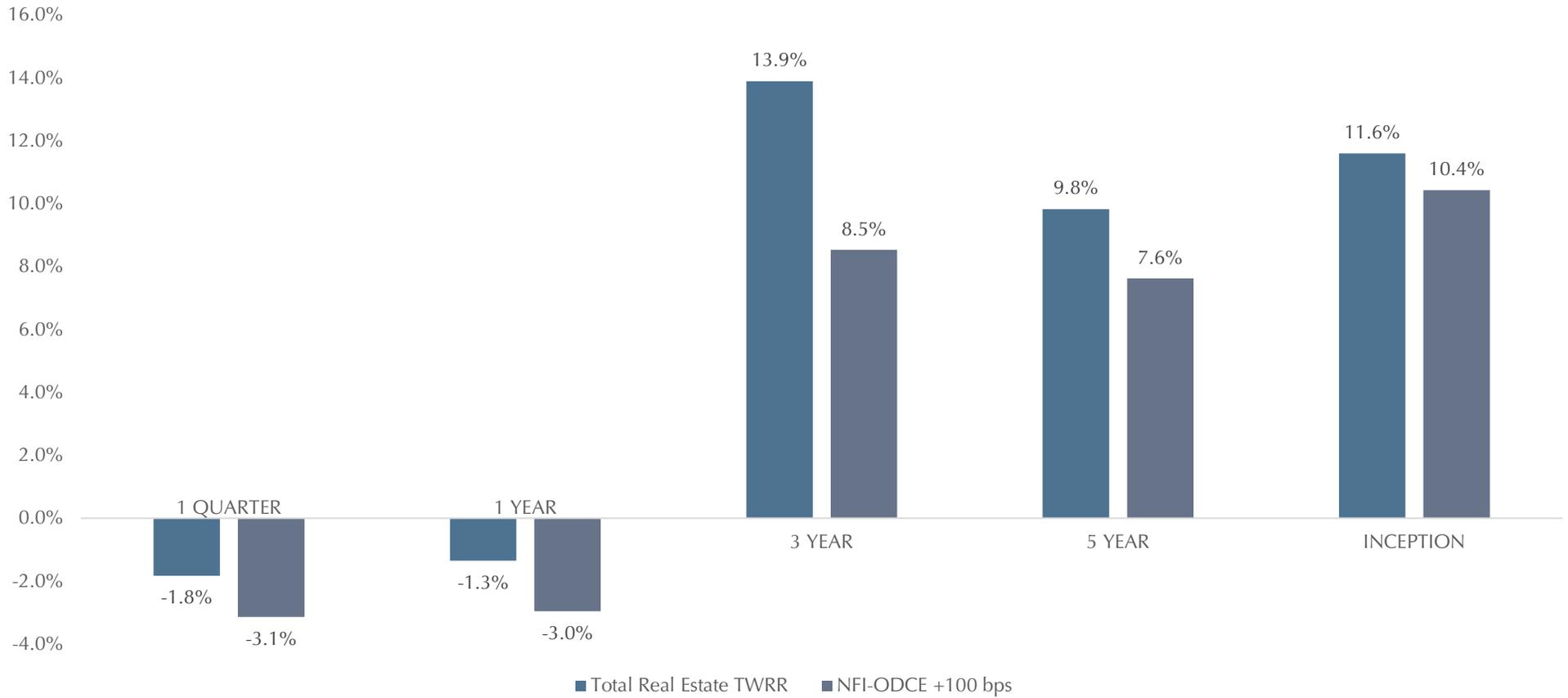
Reporting Period: Sep-2010 - Mar-2023

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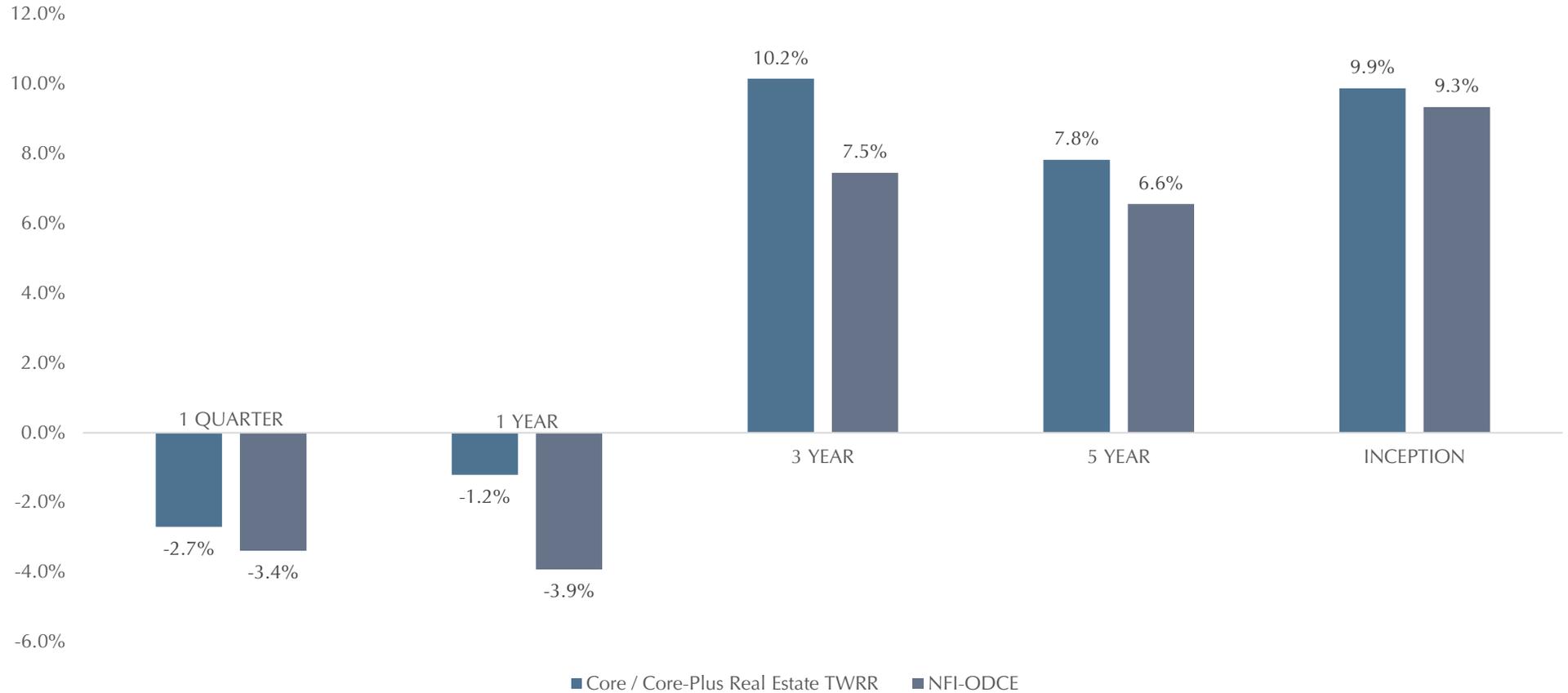
Total RE Portfolio TWRR

TOTAL NET TWRR vs. BENCHMARK



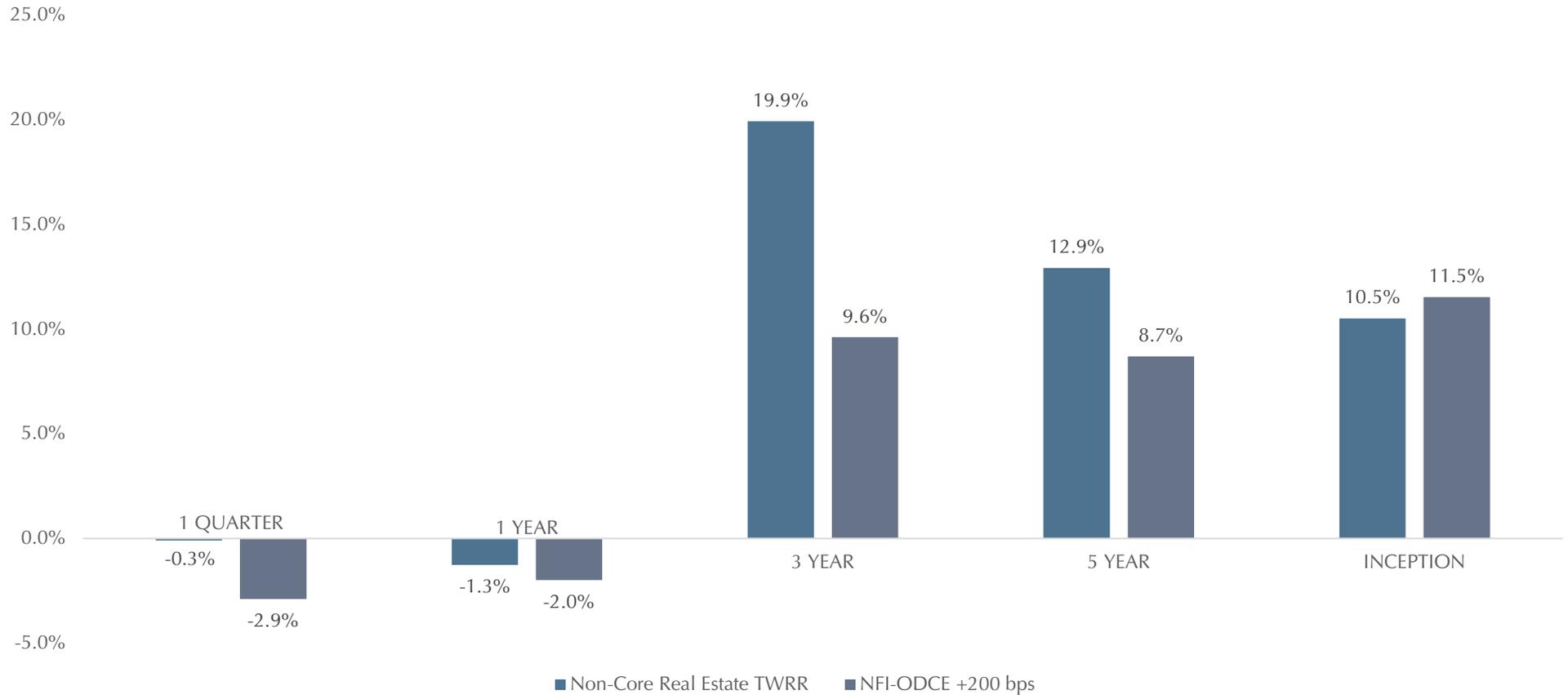
Core/Core Plus TWRR

CORE NET TWRR vs. BENCHMARK



Non-Core TWRR

NON-CORE NET TWRR vs. BENCHMARK



Portfolio Compliance Checklist

Category	Requirement	Portfolio Status
Benchmark	Comprised of NFI-ODCE +100 bps	Portfolio returns outperformed the benchmark over all periods.
Portfolio Construction	Core / Core-Plus (4%) Non-Core (4%)	Market value plus unfunded commitment place the Portfolio at 48% Core/Core-Plus and 52% Non-Core. Based on market value, the Portfolio is 65% Core/Core-Plus and 35% Non-Core.
Real Estate Allocation	Target 8%	Market value plus unfunded commitment place the Portfolio at 13.2% of total plan assets.
Property Type Diversification	Up to 40% Multifamily Up to 35% Industrial Up to 45% Office Up to 35% Retail Up to 25% Hotel Up to 20% Other	All property type allocations are compliant.
Geographic Diversification	Diversified geographically; Max 25% Ex-U.S.	All geographic allocations are compliant.
LTV	65.0%	The leverage (39.7%) is compliant.
Manager Exposure	15% of real estate allocation	All manager allocations are compliant, with EQT Partners AB being the highest at 11.2%



New Investment Commitments

Fund Name	Month Closed	Strategy	Geographic Focus	Committed capital (\$mil)
N/A	N/A	N/A	N/A	N/A

Subsequent Investment Commitments

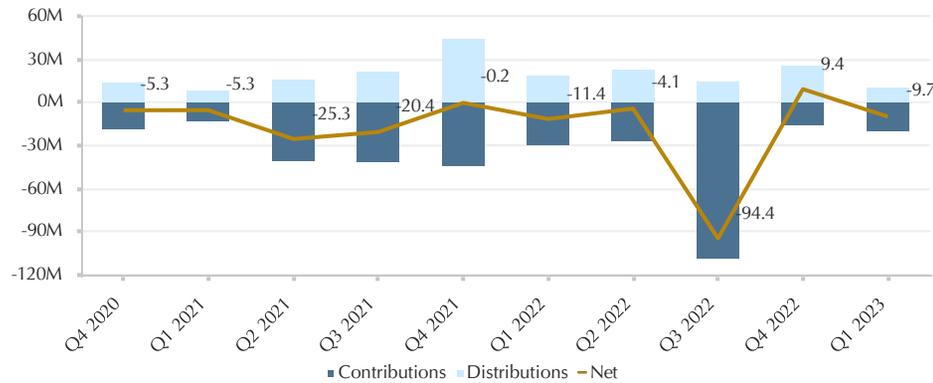
Fund Name	Month Closed	Strategy	Geographic Focus	Committed capital (\$mil)
N/A	N/A	N/A	N/A	N/A

- During the quarter, no new commitments closed.
- After quarter-end, no new commitments closed.

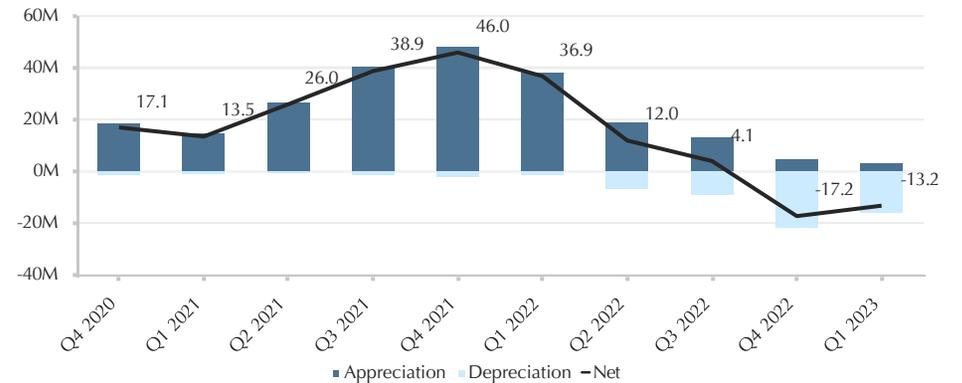


	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Core / Core-plus	0.4	4	-13.5	18	-13.1	99.1%	5.8	58.4%	3.9	20.1%	472.0
Non-Core	2.5	20	-2.6	19	-0.1	0.9%	4.1	41.6%	15.7	79.9%	252.0
Total	2.9	24	-16.1	37	-13.2	100.0%	9.9	100.0%	19.6	100.0%	724.0

Cash Flows Quarterly



Appreciation/Depreciation Quarterly

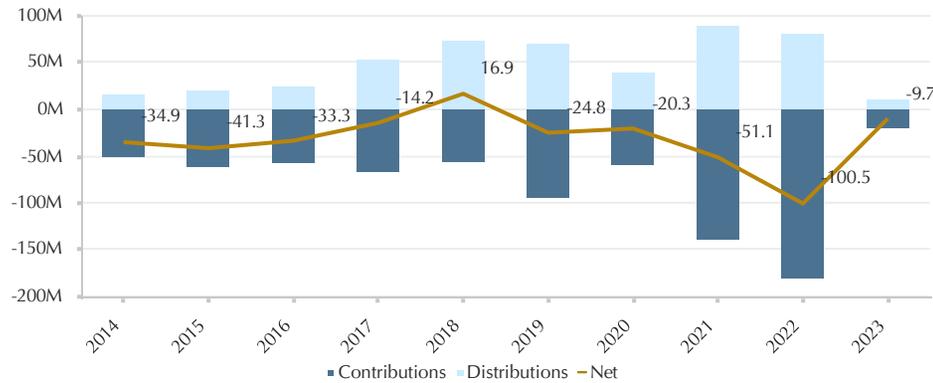


- During the quarter, \$19.6 million was contributed and \$9.9 million was distributed for a net cash outflow of \$9.7 million. 24 funds appreciated (\$2.9 million) and 37 funds depreciated during the quarter (\$16.1 million) for a total net depreciation of \$13.2 million.

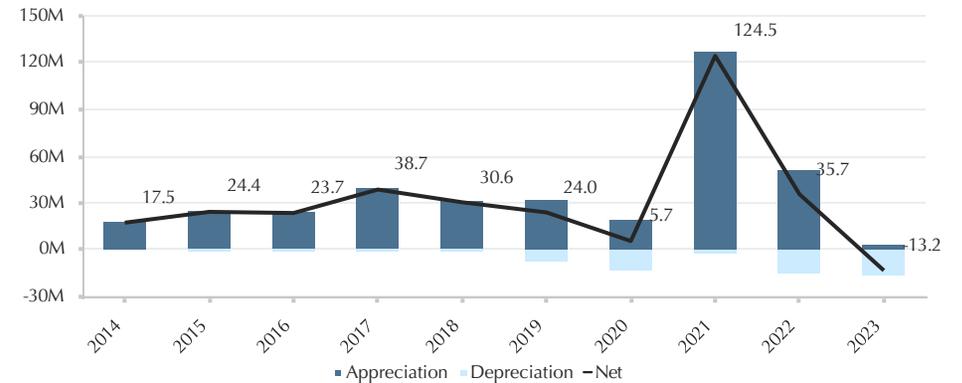


	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Core / Core-plus	8.6	7	-17.8	15	-9.2	64.3%	23.9	33.3%	102.5	60.1%	472.0
Non-Core	6.4	14	-11.6	25	-5.1	35.7%	47.8	66.7%	68.2	39.9%	252.0
Total	15.1	21	-29.4	40	-14.3	100.0%	71.8	100.0%	170.6	100.0%	724.0

Cash Flows Yearly



Appreciation/Depreciation Yearly



- During the last twelve months, the portfolio contributed \$170.6 million and distributed \$71.8 million for a net cash outflow of \$98.8 million. 21 funds appreciated (\$15.1 million) and 40 funds depreciated during the last twelve months (\$29.4 million) for a total net depreciation of \$14.3 million.

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	0.0%	80.0	0.1	0.0	79.9	79.9	-0.1	0.05	n.m. ¹	0.3x
2022	0.5%	86.0	4.7	0.0	80.6	84.4	-0.9	3.8	n.m. ¹	0.8x
2021	16.6%	229.3	118.7	9.3	117.6	237.5	10.6	120.0	n.m. ¹	1.1x
2020	7.1%	70.0	54.6	12.6	13.9	65.3	9.4	51.4	12.4%	1.2x
2019	18.0%	132.7	131.5	17.9	13.2	143.7	16.8	130.5	10.3%	1.1x
2018	5.2%	59.3	47.1	20.2	19.0	56.9	11.1	37.9	12.1%	1.2x
2017	14.1%	95.5	105.3	57.7	5.7	108.0	54.8	102.4	14.4%	1.5x
2016	11.6%	82.2	87.6	42.8	3.9	87.9	39.2	84.0	11.3%	1.4x
2015	3.7%	38.9	37.8	45.2	6.3	32.9	34.0	26.6	18.2%	1.9x
2014	4.6%	55.0	53.8	49.4	12.0	45.5	29.1	33.5	10.1%	1.5x
2013	6.8%	79.5	83.5	57.8	11.0	60.3	23.6	49.3	5.9%	1.3x
2012	0.3%	10.0	12.2	21.4	1.1	3.4	11.5	2.3	18.4%	1.9x
2011	3.1%	71.4	100.7	131.2	2.8	25.6	53.3	22.8	8.8%	1.5x
2010	8.2%	38.6	38.6	16.7	0.0	59.5	37.6	59.5	9.4%	2.0x
NYCBERS - RE	100.0%	1,128.5	876.3	482.2	366.9	1,091.0	330.0	724.0	10.3%	1.4x

The strong performance of the 2012 vintage year is the result of one non-core investment (Brookfield Strategic Real Estate Partners), while the vintage year with the greatest underperformance (2013) is driven by three NYC Asset Investor portfolios. The 2010 and 2011 vintage years also underperformed. The underperformance of the 2010 vintage year was driven by the performance of LaSalle Property Fund and the 2011 vintage year underperformance is due to Trumbull Property Fund.

Reporting Period: Sep-2010 - Mar-2023

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Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
2023	0.1	0.0	0.05	-0.1	0.3x	0.0x	0.3x	n.m. ¹
2022	4.7	0.0	3.8	-0.9	0.8x	0.0x	0.8x	n.m. ¹
2021	118.7	9.3	120.0	10.6	1.1x	0.1x	1.0x	n.m. ¹
2020	54.6	12.6	51.4	9.4	1.2x	0.2x	0.9x	12.4%
2019	131.5	17.9	130.5	16.8	1.1x	0.1x	1.0x	10.3%
2018	47.1	20.2	37.9	11.1	1.2x	0.4x	0.8x	12.1%
2017	105.3	57.7	102.4	54.8	1.5x	0.5x	1.0x	14.4%
2016	87.6	42.8	84.0	39.2	1.4x	0.5x	1.0x	11.3%
2015	37.8	45.2	26.6	34.0	1.9x	1.2x	0.7x	18.2%
2014	53.8	49.4	33.5	29.1	1.5x	0.9x	0.6x	10.1%
2013	83.5	57.8	49.3	23.6	1.3x	0.7x	0.6x	5.9%
2012	12.2	21.4	2.3	11.5	1.9x	1.7x	0.2x	18.4%
2011	100.7	131.2	22.8	53.3	1.5x	1.3x	0.2x	8.8%
2010	38.6	16.7	59.5	37.6	2.0x	0.4x	1.5x	9.4%

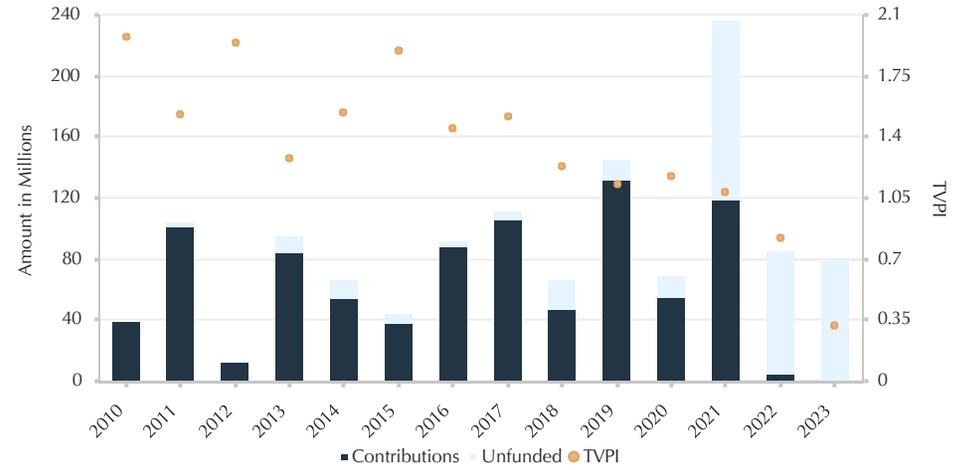
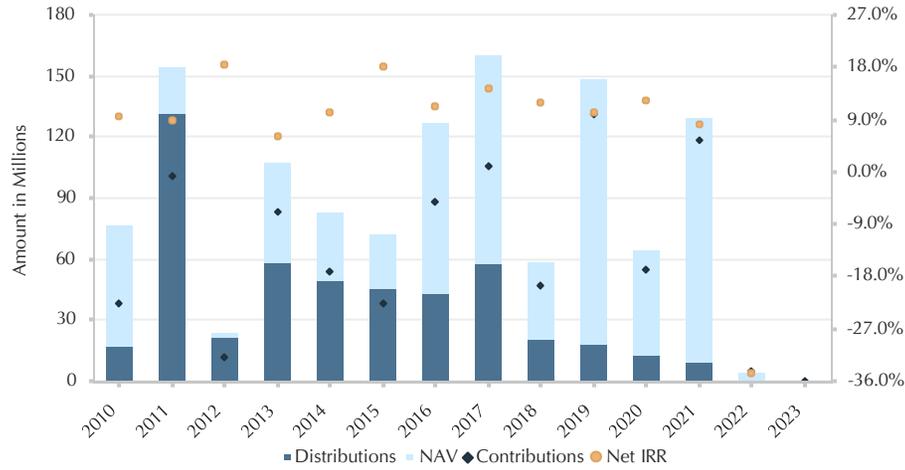
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Reporting Period: Sep-2010 - Mar-2023

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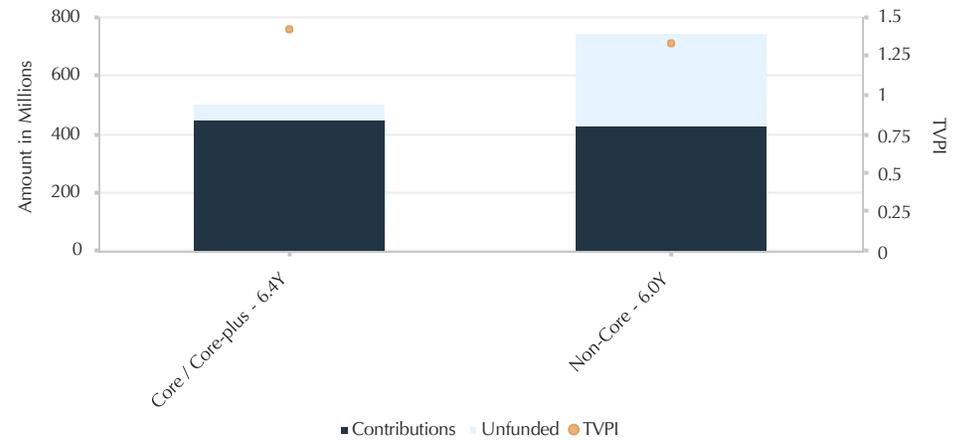
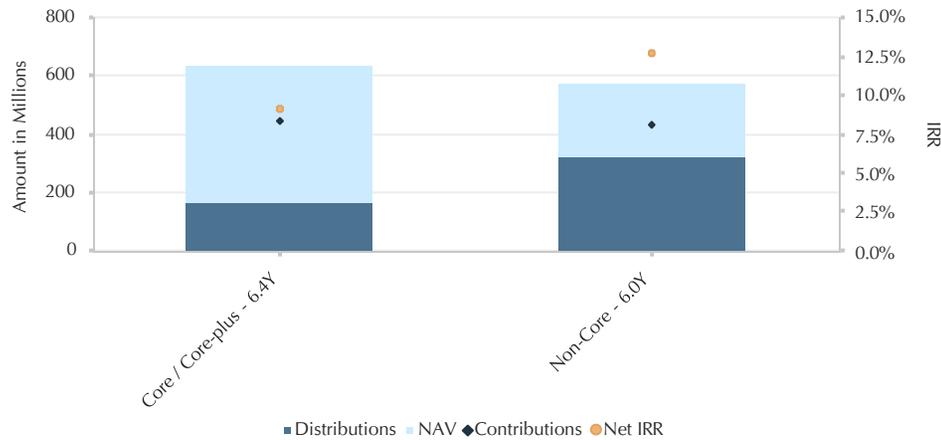


Performance Review by Vintage Year



Total Exposure = Unfunded + NAV

Strategy	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Non-Core	428.9	318.7	252.0	141.9	1.3x	0.7x	0.6x	12.6%
Core / Core-plus	447.4	163.5	472.0	188.1	1.4x	0.4x	1.1x	9.1%
EM/Debt								
Emerging	24.6	20.4	12.3	8.1	1.3x	0.8x	0.5x	15.2%
Debt	117.9	46.4	86.1	14.6	1.1x	0.4x	0.7x	5.3%



By Strategy

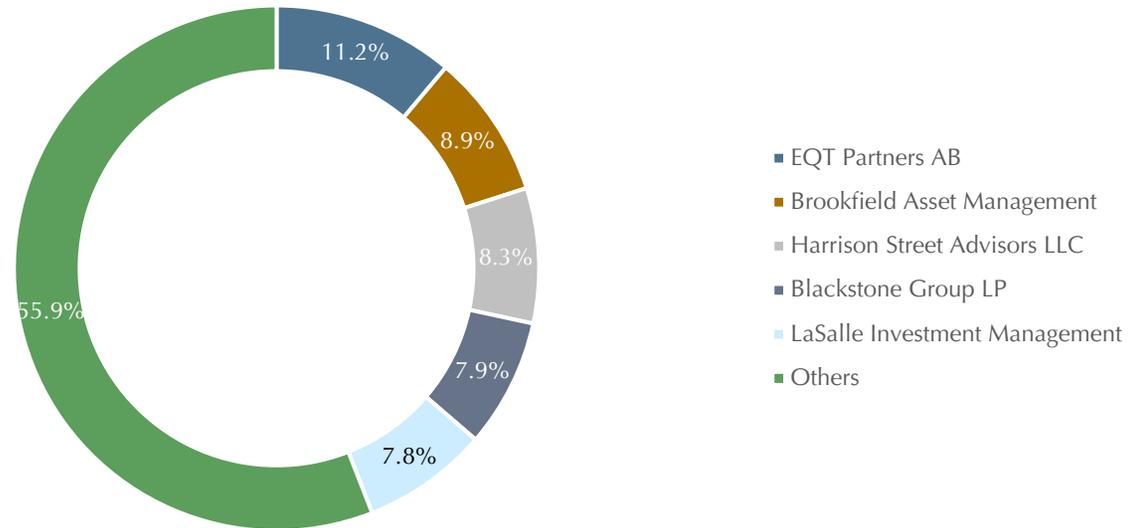


Weighted Average Age (WAA) is based on contributions
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age



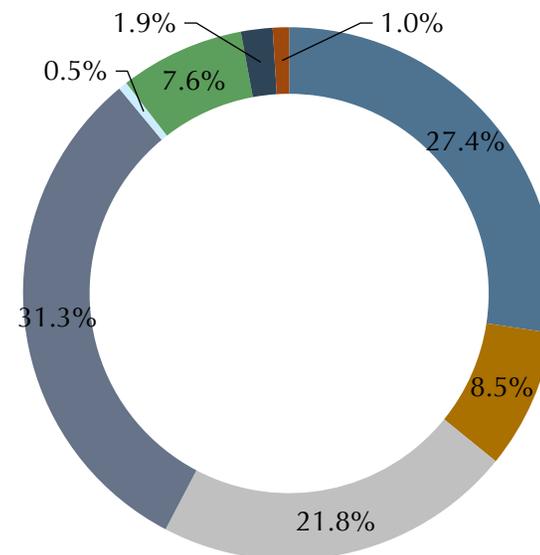
	Total Commitments (\$mm)	Total Exposure (\$mm)	% of Portfolio (Total Exposure)	Contributions (\$mm)	Distributions (\$mm)	Number of Holdings	Net TVPI
EQT Partners AB	117.7	121.7	11.2%	40.4	24.9	6	1.7x
Brookfield Asset Management	86.0	97.2	8.9%	67.8	30.3	4	1.4x
Harrison Street Advisors LLC	85.0	90.7	8.3%	88.0	3.2	2	1.1x
Blackstone Group LP	104.0	86.4	7.9%	67.0	65.7	4	1.5x
LaSalle Investment Management	63.6	84.7	7.8%	50.4	17.2	3	1.8x
Total Portfolio (33)	1,128.5	1,091.0	100.0%	876.3	482.2	62	1.4x

EXPOSURE BY MANAGER



Geographic Exposure by NAV

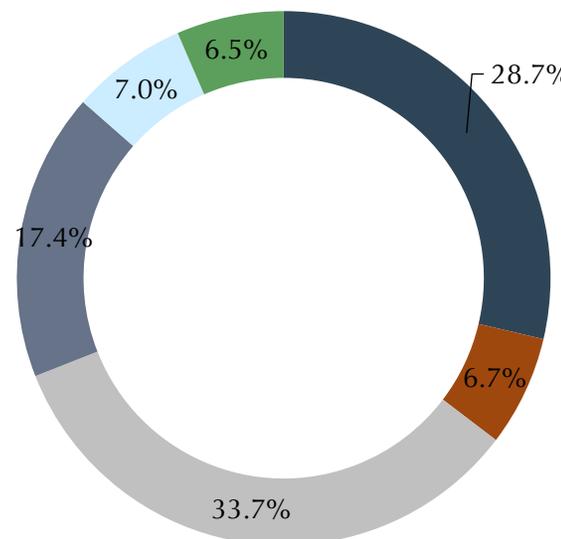
	NAV	NFI OCDE
US East North Central	6.6%	5.4%
US Mid East	8.5%	8.1%
US Mountain	7.3%	7.2%
US North East	18.9%	21.1%
US Pacific	24.0%	37.1%
US South East	13.2%	11.3%
US South West	8.7%	9.0%
US West North Central	1.8%	0.8%
US – Various	0.5%	0.0%
Europe	7.6%	N/A
Asia/Pacific	1.9%	N/A
Rest of World	1.0%	N/A



- US East
- US Midwest
- US South
- US West
- US - Various
- Europe
- Asia/Pacific
- Rest of World

Property Type Exposure by NAV

	NAV	NFI OCDE
Apartment	28.7%	29.3%
Hotel	6.7%	0.0%
Industrial	33.7%	31.4%
Office	17.4%	20.8%
Retail	7.0%	10.1%
Other	6.5%	8.4%



- Apartment
- Hotel
- Industrial
- Office
- Retail
- Other



	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Core / Core-plus											
Almanac Realty Securities VIII	USD	0.9%	10.5	6.4	1.5	4.9	11.2	1.4	6.3	12.1%	1.2x
Almanac Realty Securities VIII (Sidecar II)	USD	0.7%	7.0	4.3	1.1	2.8	7.6	1.5	4.7	18.4%	1.3x
Artemis Real Estate Partners Income and Growth Fund	USD	0.8%	10.0	8.0	2.1	3.3	9.4	0.2	6.1	1.8%	1.0x
Brookfield Premier Real Estate Partners	USD	5.3%	25.0	29.9	4.9	0.0	38.1	13.1	38.1	11.4%	1.4x
Cortland Growth and Income	USD	1.9%	10.0	11.4	1.4	0.0	14.0	4.0	14.0	13.3%	1.3x
EQT Exeter Industrial Core-Plus Fund IV	USD	0.5%	40.0	3.9	0.0	36.1	39.5	-0.5	3.4	n.m. ¹	0.9x
Exeter Core Industrial Club Fund II	USD	2.6%	10.0	9.7	4.3	0.3	19.1	13.4	18.8	20.9%	2.4x
Exeter Industrial Core Fund III	USD	1.8%	12.7	12.5	1.4	0.2	13.6	2.3	13.4	9.7%	1.2x
Harrison Street Core Property Fund	USD	11.6%	80.0	83.1	2.8	0.0	84.1	3.8	84.1	4.3%	1.0x
Heitman Core Real Estate Debt Income Trust	USD	3.8%	25.0	29.6	4.7	0.0	27.5	2.7	27.5	3.9%	1.1x
HSRE-Centre Street Core Co-Investment	USD	0.9%	5.0	4.9	0.4	0.2	6.6	1.9	6.4	13.3%	1.4x
Jamestown Premier Property Fund	USD	0.4%	6.2	7.4	3.0	0.0	3.2	-1.1	3.2	-4.5%	0.8x
LaSalle GPS Co-Investment Program – Core	USD	0.9%	10.0	6.2	0.3	3.8	10.2	0.5	6.4	n.m. ¹	1.1x
LaSalle Property Fund	USD	8.2%	38.6	38.6	16.7	0.0	59.5	37.6	59.5	9.4%	2.0x
Lion Industrial Trust	USD	6.8%	18.0	24.6	5.4	0.0	48.9	29.7	48.9	19.6%	2.2x
MetLife Core Property Fund	USD	3.2%	15.0	15.0	5.9	0.0	23.4	14.3	23.4	9.6%	2.0x
NYC Asset Investor #2	USD	0.9%	11.0	11.5	4.7	0.00	6.8	0.01	6.8	0.0%	1.0x
NYCRS Artemis Mach II	USD	0.5%	11.0	12.9	16.9	0.8	4.4	7.5	3.5	16.6%	1.6x
RREEF America REIT II	USD	2.7%	17.0	17.0	0.9	0.0	19.4	3.3	19.4	n.m. ¹	1.2x
RREEF Core Plus Industrial Fund	USD	4.1%	25.0	25.6	0.6	0.0	29.7	4.7	29.7	n.m. ¹	1.2x
Trumbull Property Fund	USD	3.1%	41.4	64.4	82.0	0.0	22.5	40.1	22.5	7.4%	1.6x
USAA Eagle Real Estate Feeder 1	USD	3.6%	18.0	20.6	2.7	0.0	25.7	7.8	25.7	6.8%	1.4x

Reporting Period: As Of Mar-2023

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	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Total Core / Core-plus	USD	65.2%	446.4	447.4	163.5	52.5	524.5	188.1	472.0	9.1%	1.4x
Non-Core											
Aermont Capital Real Estate Fund IV	USD	0.8%	9.8	7.1	0.0	2.9	8.8	-1.2	5.9	-9.7%	0.8x
Aermont Capital Real Estate Fund V	USD	-0.1%	34.3	0.0	0.0	33.6	33.2	-0.4	-0.4	n.m.	0.0x
Almanac Realty Securities IX	USD	0.4%	23.3	3.0	0.00	20.3	23.1	-0.2	2.8	n.m. ¹	0.9x
Almanac Realty Securities IX (Sidecar II)	USD	0.1%	11.7	0.8	0.0	10.9	11.7	0.06	0.9	n.m. ¹	1.1x
Artemis Real Estate Partners Healthcare Fund II	USD	0.3%	15.0	2.9	0.8	12.9	14.7	-0.3	1.9	n.m. ¹	0.9x
BIG Real Estate Fund II	USD	1.2%	25.0	11.7	3.5	16.2	25.0	0.5	8.7	n.m. ¹	1.0x
Blackstone Real Estate Partners Europe IV (USD)	USD	0.7%	32.5	32.6	41.3	6.0	11.3	13.9	5.3	11.4%	1.4x
Blackstone Real Estate Partners IX	USD	2.4%	15.0	15.4	5.0	2.8	20.3	7.1	17.6	27.1%	1.5x
Blackstone Real Estate Partners VIII	USD	1.7%	16.5	18.8	19.5	2.3	14.9	13.2	12.6	16.4%	1.7x
Blackstone Real Estate Partners X	USD	0.0%	40.0	0.1	0.0	39.9	39.9	-0.1	0.05	n.m. ¹	0.3x
Brookfield Strategic Real Estate Partners	USD	0.3%	10.0	12.2	21.4	1.1	3.4	11.5	2.3	18.4%	1.9x
Brookfield Strategic Real Estate Partners III	USD	1.6%	12.0	10.8	2.8	3.9	15.4	3.6	11.6	13.3%	1.3x
Brookfield Strategic Real Estate Partners IV	USD	2.1%	39.0	14.9	1.2	25.3	40.3	1.3	14.9	n.m. ¹	1.1x
Carlyle Realty Partners VII	USD	0.8%	25.0	23.2	27.9	12.0	18.1	10.8	6.1	12.7%	1.5x
DivcoWest Fund V	USD	1.0%	10.0	8.0	2.9	2.0	9.0	1.9	6.9	5.8%	1.2x
DivcoWest Fund VI	USD	0.7%	10.0	5.1	0.2	5.0	9.8	-0.1	4.8	-2.1%	1.0x
DRA Growth and Income Fund IX	USD	1.0%	10.0	11.0	10.4	0.9	8.3	6.9	7.5	18.0%	1.6x
EQT Exeter Industrial Value Fund VI	USD	-	40.0	0.0	0.0	40.0	40.0	0.0	0.0 ²	n.m.	0.0x
European Property Investors Special Opportunities 4	USD	1.4%	11.2	10.2	4.2	1.5	11.3	3.9	9.9	7.9%	1.4x
Exeter Industrial Value Fund IV	USD	0.2%	10.0	9.4	19.2	0.6	2.0	11.3	1.5	30.7%	2.2x
Exeter Industrial Value Fund V	USD	1.0%	5.0	4.9	0.0	0.08	7.5	2.5	7.4	31.7%	1.5x

Reporting Period: As Of Mar-2023

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22

Board of Education
Retirement System

Aksia

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Franklin Templeton Private Real Estate Fund	USD	0.0%	30.0	36.3	49.3	2.8	3.1	13.2	0.3	19.1%	1.4x
Greenoak Asia (USD) III	USD	0.7%	10.0	10.4	5.7	3.4	8.8	0.7	5.4	8.9%	1.1x
H/2 Special Opportunities III	USD	0.5%	15.0	15.6	15.6	0.0	4.0	3.9	4.0	7.3%	1.3x
H/2 Special Opportunities IV	USD	1.4%	10.0	10.1	2.3	0.0	9.9	2.2	9.9	6.2%	1.2x
KKR Real Estate Partners Americas II	USD	0.5%	10.0	10.5	12.8	1.2	4.5	5.7	3.3	24.4%	1.5x
KKR Real Estate Partners Americas III	USD	2.6%	35.0	21.2	1.6	14.8	33.7	-0.7	18.9	n.m. ¹	1.0x
KKR Real Estate Partners Europe II	USD	0.8%	10.0	7.0	2.0	3.8	9.3	0.4	5.4	5.6%	1.1x
KKR Real Estate Securities Dislocation Opportunity Co-Investment Fund	USD	0.1%	10.0	6.0	6.7	0.06	0.9	1.6	0.9	35.4%	1.3x
LaSalle GPS Co-investment Program - Non-Core	USD	0.8%	15.0	5.6	0.2	9.4	15.0	0.2	5.7	n.m. ¹	1.0x
Lone Star Real Estate Fund V	USD	0.4%	9.2	7.7	4.0	1.7	4.4	-1.0	2.6	-6.6%	0.9x
Mesirow Financial Real Estate Value Fund IV	USD	1.6%	25.0	10.6	0.4	14.8	26.5	1.4	11.6	n.m. ¹	1.1x
NYC Asset Investor #1	USD	0.9%	10.0	12.9	7.5	2.9	9.1	0.7	6.2	1.1%	1.1x
NYC Asset Investor #3	USD	0.7%	8.0	5.8	1.6	2.2	7.5	1.1	5.3	3.1%	1.2x
NYCRS-KKR CMBS Retention Partners	USD	1.5%	13.0	12.1	5.1	1.4	12.0	3.5	10.6	6.7%	1.3x
Pramerica Real Estate Capital VI	USD	0.5%	10.3	10.9	8.8	1.1	4.9	1.7	3.8	7.5%	1.2x
PW Real Estate Fund III	USD	0.6%	11.2	8.8	21.5	2.5	6.7	16.9	4.1	30.7%	2.9x
Rialto Real Estate Fund IV - Debt	USD	2.6%	25.0	20.2	2.3	4.9	23.9	1.1	19.0	5.1%	1.1x
Westbrook Real Estate Co-Investment Partnership X	USD	0.5%	10.0	9.7	8.5	0.8	4.2	2.2	3.4	9.3%	1.2x
Westbrook Real Estate Fund XI	USD	0.5%	10.0	5.3	2.6	6.6	10.3	1.0	3.6	21.5%	1.2x
Total Non-Core	USD	34.8%	682.1	428.9	318.7	314.4	566.5	141.9	252.0	12.6%	1.3x
NYCBERS - RE	USD	100.0%	1,128.5	876.3	482.2	366.9	1,091.0	330.0	724.0	10.3%	1.4x

¹ IRR not meaningful for investments held less than 24 months² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.

Reporting Period: As Of Mar-2023

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23

Board of Education
Retirement System

Aksia

	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
Core / Core-plus										
Almanac Realty Securities VIII	USD	2018	6.4	1.5	6.3	1.4	1.2x	0.2x	1.0x	12.1%
Almanac Realty Securities VIII (Sidecar II)	USD	2018	4.3	1.1	4.7	1.5	1.3x	0.3x	1.1x	18.4%
Artemis Real Estate Partners Income and Growth Fund	USD	2018	8.0	2.1	6.1	0.2	1.0x	0.3x	0.8x	1.8%
Brookfield Premier Real Estate Partners	USD	2016	29.9	4.9	38.1	13.1	1.4x	0.2x	1.3x	11.4%
Cortland Growth and Income	USD	2020	11.4	1.4	14.0	4.0	1.3x	0.1x	1.2x	13.3%
EQT Exeter Industrial Core-Plus Fund IV	USD	2022	3.9	0.0	3.4	-0.5	0.9x	0.0x	0.9x	n.m. ¹
Exeter Core Industrial Club Fund II	USD	2016	9.7	4.3	18.8	13.4	2.4x	0.4x	1.9x	20.9%
Exeter Industrial Core Fund III	USD	2019	12.5	1.4	13.4	2.3	1.2x	0.1x	1.1x	9.7%
Harrison Street Core Property Fund	USD	2019	83.1	2.8	84.1	3.8	1.0x	0.0x	1.0x	4.3%
Heitman Core Real Estate Debt Income Trust	USD	2017	29.6	4.7	27.5	2.7	1.1x	0.2x	0.9x	3.9%
HSRE-Centre Street Core Co-Investment	USD	2019	4.9	0.4	6.4	1.9	1.4x	0.1x	1.3x	13.3%
Jamestown Premier Property Fund	USD	2016	7.4	3.0	3.2	-1.1	0.8x	0.4x	0.4x	-4.5%
LaSalle GPS Co-Investment Program – Core	USD	2021	6.2	0.3	6.4	0.5	1.1x	0.0x	1.0x	n.m. ¹
LaSalle Property Fund	USD	2010	38.6	16.7	59.5	37.6	2.0x	0.4x	1.5x	9.4%
Lion Industrial Trust	USD	2017	24.6	5.4	48.9	29.7	2.2x	0.2x	2.0x	19.6%
MetLife Core Property Fund	USD	2014	15.0	5.9	23.4	14.3	2.0x	0.4x	1.6x	9.6%
NYC Asset Investor #2	USD	2013	11.5	4.7	6.8	0.01	1.0x	0.4x	0.6x	0.0%
NYCRS Artemis Mach II	USD	2016	12.9	16.9	3.5	7.5	1.6x	1.3x	0.3x	16.6%
RREEF America REIT II	USD	2021	17.0	0.9	19.4	3.3	1.2x	0.1x	1.1x	n.m. ¹
RREEF Core Plus Industrial Fund	USD	2021	25.6	0.6	29.7	4.7	1.2x	0.0x	1.2x	n.m. ¹
Trumbull Property Fund	USD	2011	64.4	82.0	22.5	40.1	1.6x	1.3x	0.3x	7.4%
USAA Eagle Real Estate Feeder 1	USD	2013	20.6	2.7	25.7	7.8	1.4x	0.1x	1.2x	6.8%
Total Core / Core-plus	USD		447.4	163.5	472.0	188.1	1.4x	0.4x	1.1x	9.1%

Performance Statistics by Strategy

	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
Non-Core										
Aermont Capital Real Estate Fund IV	USD	2018	7.1	0.0	5.9	-1.2	0.8x	0.0x	0.8x	-9.7%
Aermont Capital Real Estate Fund V	USD	2022	0.0	0.0	-0.4	-0.4	0.0x	0.0x	0.0x	n.m.
Almanac Realty Securities IX	USD	2021	3.0	0.00	2.8	-0.2	0.9x	0.0x	0.9x	n.m. ¹
Almanac Realty Securities IX (Sidecar II)	USD	2022	0.8	0.0	0.9	0.06	1.1x	0.0x	1.1x	n.m. ¹
Artemis Real Estate Partners Healthcare Fund II	USD	2021	2.9	0.8	1.9	-0.3	0.9x	0.3x	0.6x	n.m. ¹
BIG Real Estate Fund II	USD	2021	11.7	3.5	8.7	0.5	1.0x	0.3x	0.7x	n.m. ¹
Blackstone Real Estate Partners Europe IV (USD)	USD	2013	32.6	41.3	5.3	13.9	1.4x	1.3x	0.2x	11.4%
Blackstone Real Estate Partners IX	USD	2019	15.4	5.0	17.6	7.1	1.5x	0.3x	1.1x	27.1%
Blackstone Real Estate Partners VIII	USD	2015	18.8	19.5	12.6	13.2	1.7x	1.0x	0.7x	16.4%
Blackstone Real Estate Partners X	USD	2023	0.1	0.0	0.05	-0.1	0.3x	0.0x	0.3x	n.m. ¹
Brookfield Strategic Real Estate Partners	USD	2012	12.2	21.4	2.3	11.5	1.9x	1.7x	0.2x	18.4%
Brookfield Strategic Real Estate Partners III	USD	2018	10.8	2.8	11.6	3.6	1.3x	0.3x	1.1x	13.3%
Brookfield Strategic Real Estate Partners IV	USD	2021	14.9	1.2	14.9	1.3	1.1x	0.1x	1.0x	n.m. ¹
Carlyle Realty Partners VII	USD	2014	23.2	27.9	6.1	10.8	1.5x	1.2x	0.3x	12.7%
DivcoWest Fund V	USD	2016	8.0	2.9	6.9	1.9	1.2x	0.4x	0.9x	5.8%
DivcoWest Fund VI	USD	2020	5.1	0.2	4.8	-0.1	1.0x	0.0x	0.9x	-2.1%
DRA Growth and Income Fund IX	USD	2017	11.0	10.4	7.5	6.9	1.6x	0.9x	0.7x	18.0%
EQT Exeter Industrial Value Fund VI	USD	2023	0.0	0.0	0.0 ²	0.0	0.0x	0.0x	0.0x	n.m.
European Property Investors Special Opportunities 4	USD	2015	10.2	4.2	9.9	3.9	1.4x	0.4x	1.0x	7.9%
Exeter Industrial Value Fund IV	USD	2017	9.4	19.2	1.5	11.3	2.2x	2.0x	0.2x	30.7%
Exeter Industrial Value Fund V	USD	2020	4.9	0.0	7.4	2.5	1.5x	0.0x	1.5x	31.7%
Franklin Templeton Private Real Estate Fund	USD	2011	36.3	49.3	0.3	13.2	1.4x	1.4x	0.0x	19.1%
Greenoak Asia (USD) III	USD	2019	10.4	5.7	5.4	0.7	1.1x	0.6x	0.5x	8.9%

Reporting Period: As Of Mar-2023

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25



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	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
H/2 Special Opportunities III	USD	2014	15.6	15.6	4.0	3.9	1.3x	1.0x	0.3x	7.3%
H/2 Special Opportunities IV	USD	2016	10.1	2.3	9.9	2.2	1.2x	0.2x	1.0x	6.2%
KKR Real Estate Partners Americas II	USD	2018	10.5	12.8	3.3	5.7	1.5x	1.2x	0.3x	24.4%
KKR Real Estate Partners Americas III	USD	2021	21.2	1.6	18.9	-0.7	1.0x	0.1x	0.9x	n.m. ¹
KKR Real Estate Partners Europe II	USD	2020	7.0	2.0	5.4	0.4	1.1x	0.3x	0.8x	5.6%
KKR Real Estate Securities Dislocation Opportunity Co-In	USD	2020	6.0	6.7	0.9	1.6	1.3x	1.1x	0.1x	35.4%
LaSalle GPS Co-investment Program - Non-Core	USD	2021	5.6	0.2	5.7	0.2	1.0x	0.0x	1.0x	n.m. ¹
Lone Star Real Estate Fund V	USD	2017	7.7	4.0	2.6	-1.0	0.9x	0.5x	0.3x	-6.6%
Mesirow Financial Real Estate Value Fund IV	USD	2021	10.6	0.4	11.6	1.4	1.1x	0.0x	1.1x	n.m. ¹
NYC Asset Investor #1	USD	2013	12.9	7.5	6.2	0.7	1.1x	0.6x	0.5x	1.1%
NYC Asset Investor #3	USD	2013	5.8	1.6	5.3	1.1	1.2x	0.3x	0.9x	3.1%
NYCRS-KKR CMBS Retention Partners	USD	2017	12.1	5.1	10.6	3.5	1.3x	0.4x	0.9x	6.7%
Pramerica Real Estate Capital VI	USD	2017	10.9	8.8	3.8	1.7	1.2x	0.8x	0.3x	7.5%
PW Real Estate Fund III	USD	2015	8.8	21.5	4.1	16.9	2.9x	2.5x	0.5x	30.7%
Rialto Real Estate Fund IV - Debt	USD	2020	20.2	2.3	19.0	1.1	1.1x	0.1x	0.9x	5.1%
Westbrook Real Estate Co-Investment Partnership X	USD	2016	9.7	8.5	3.4	2.2	1.2x	0.9x	0.4x	9.3%
Westbrook Real Estate Fund XI	USD	2019	5.3	2.6	3.6	1.0	1.2x	0.5x	0.7x	21.5%
Total Non-Core	USD		428.9	318.7	252.0	141.9	1.3x	0.7x	0.6x	12.6%
NYCBERS - RE	USD		876.3	482.2	724.0	330.0	1.4x	0.6x	0.8x	10.3%

¹ IRR not meaningful for investments held less than 24 months

² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.

* Total figures take into account all current and closed portfolio positions as at Mar-2023

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Infrastructure Quarterly Report (Public):

NYC Board of Education Retirement System

NYCBERS - INFRA

Portfolio Report

As Of March 2023

Report created: July 2023

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Portfolio Snapshot	3
Portfolio Overview	5
Performance Review	6
Portfolio QoQ Overview	8
TVPI Distribution	9
Capital Account Change	10
Portfolio Summary	13
Period Chart Analysis	15
Movement By Strategy - QTD	16
Movement by Fund - QTD	17
Movement By Strategy - LTM	18
Movement by Fund - LTM	19
Top 5 GP Relationships	20
Top 5 GP Relationships IRR	21
Portfolio IRR vs Benchmark PME+	22
Performance Statistics	23
Portfolio Composition - Industry Group	25
Portfolio Composition - Country	26
Portfolio Top 20 Investments by FMV	27

Summary



Portfolio Summary

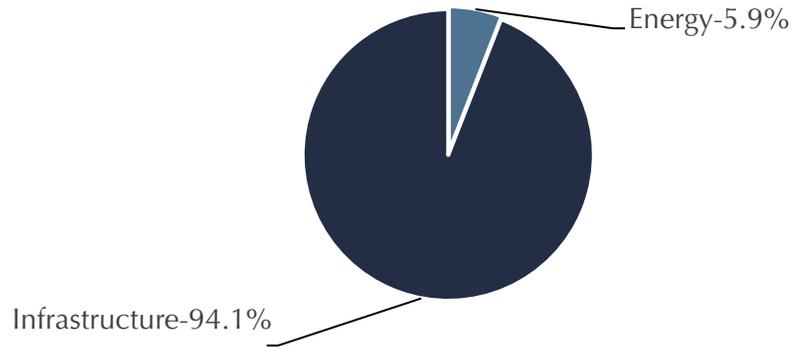
Total Pension Assets	\$8.3 bn as of 03/31/2023
GP Relationships	14
Holdings	34
# of New Investments within the quarter*	2
# of Underlying Active Investments	284
% of Public Companies	9.9%
Total Commitment Amount	\$682.9 mm
Net Contributions	\$280.9 mm
Net Distributions	\$106.1 mm
Net Asset Value	\$280.7 mm
Weighted Average Age	5.0Y
Unfunded Commitment	\$402.4 mm
Minimum Annual Pacing	100.0 mm
Maximum Annual Pacing	150.0 mm
Portfolio Allocation	3.4%
Minimum Target Allocation	2.0%
Maximum Target Allocation	6.0%

1Y IRR	7.7%	2Y IRR	11.6%	3Y IRR	12.8%
5Y IRR	11.6%	7Y IRR	12.4%	ITD IRR**	12.2%
				ITD TVPI**	1.3x

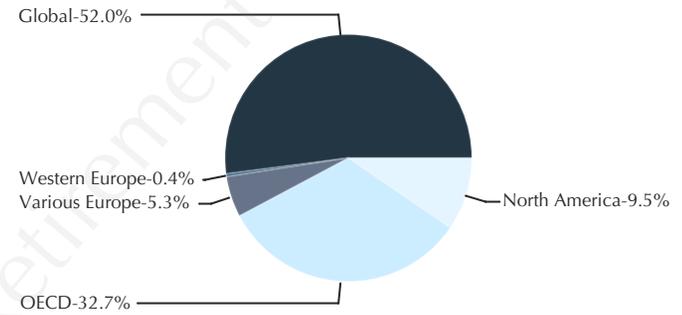
* Jan-2023 - Mar-2023
 ** Jul-2013 - Mar-2023

Position Analytics data based on GP provided information as of Mar-2023
 IRR not meaningful for investments held less than 24 months
 Weighted Average Age (WAA) is based on net contributions
 WAA is calculated as the sum of the individual net contributions divided by the overall net contribution and then multiplied by the age
 Total Exposure = Unfunded + NAV

Total Exposure by Strategy



Total Exposure by Region

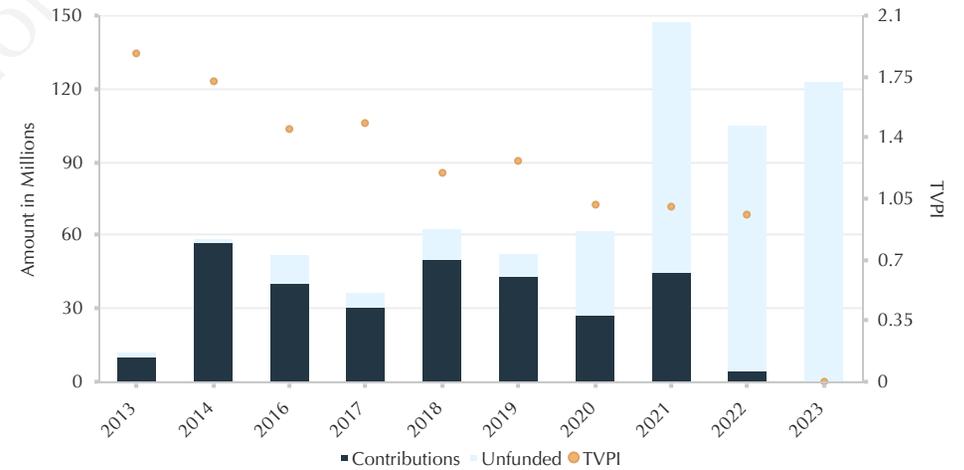
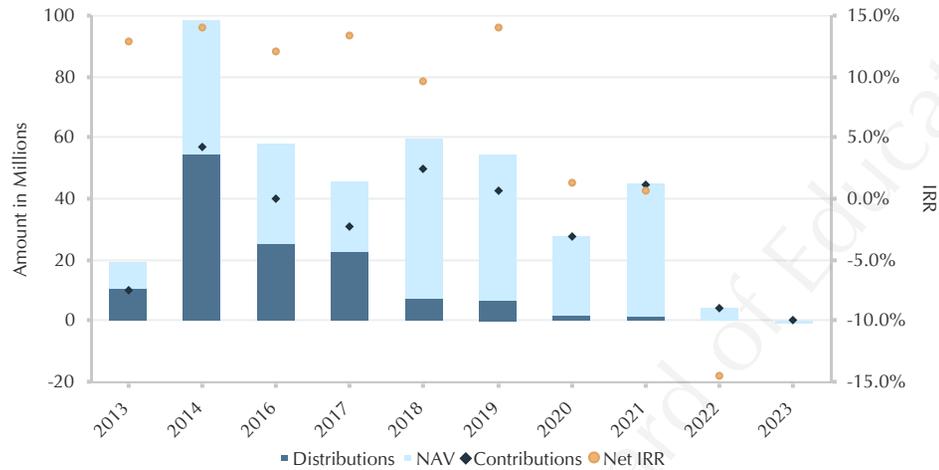


Position Analytics data based on GP provided information as of Mar-2023
 IRR not meaningful for investments held less than 24 months
 Weighted Average Age (WAA) is based on net contributions
 WAA is calculated as the sum of the individual net contributions divided by the overall net contribution and then multiplied by the age
 Total Exposure = Unfunded + NAV

Strategy Portfolio Summary

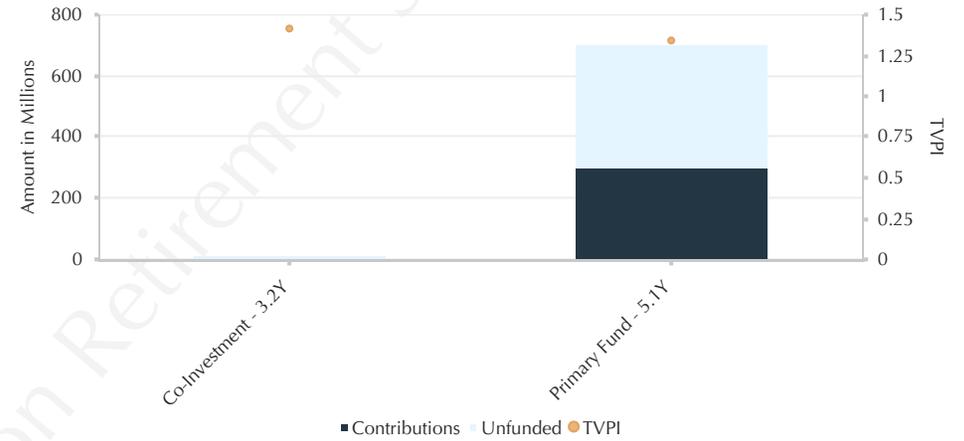
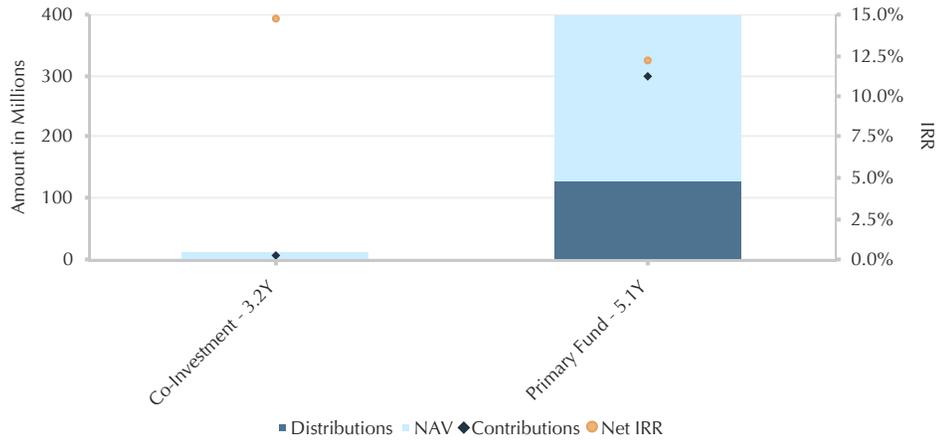
	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Net IRR	TVPI
Energy	3	5.2	7.9	52.3	32.6	40.4	21.4	17.3	8.1%	1.2x
Infrastructure	31	5.0	272.8	630.6	369.9	642.7	285.3	112.6	12.5%	1.4x
NYCBERS - INFRA	34	5.0	280.7	682.9	402.4	683.1	306.7	129.9	12.2%	1.3x

Performance Review by Vintage Year

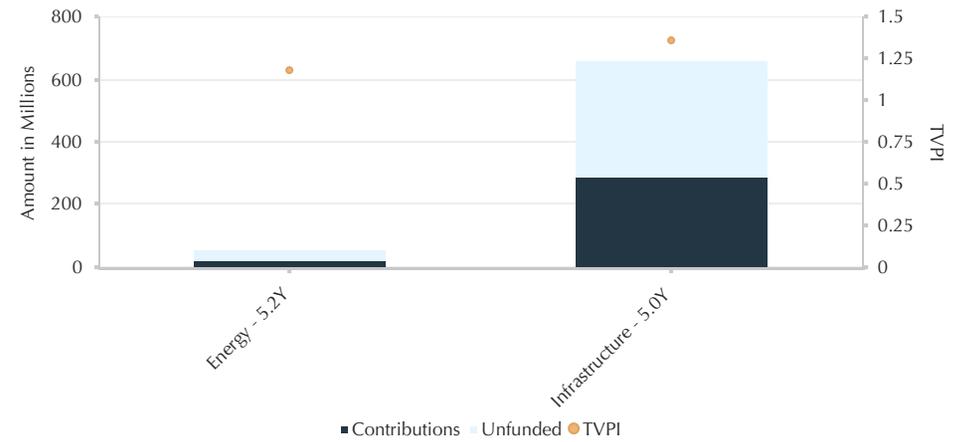
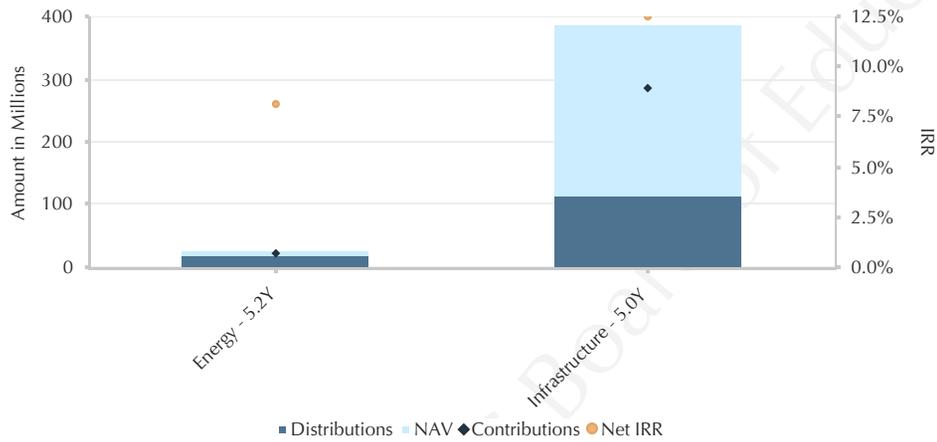


Total Exposure = Unfunded + NAV

Performance Review by Structure

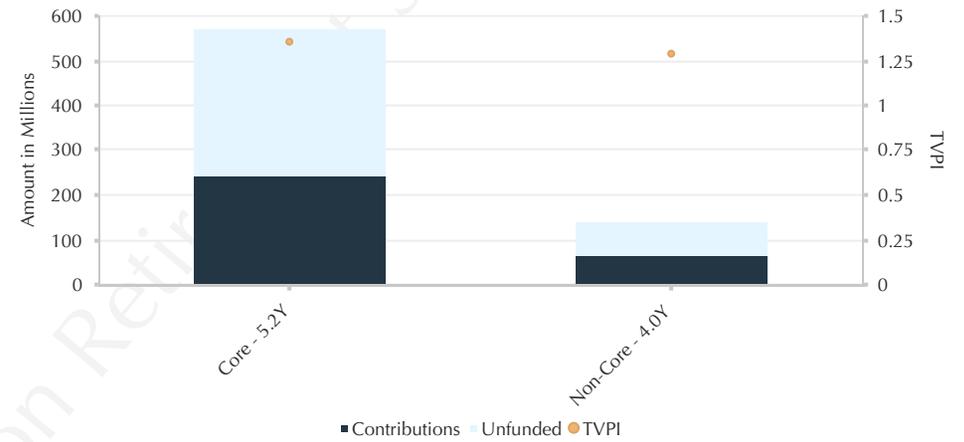
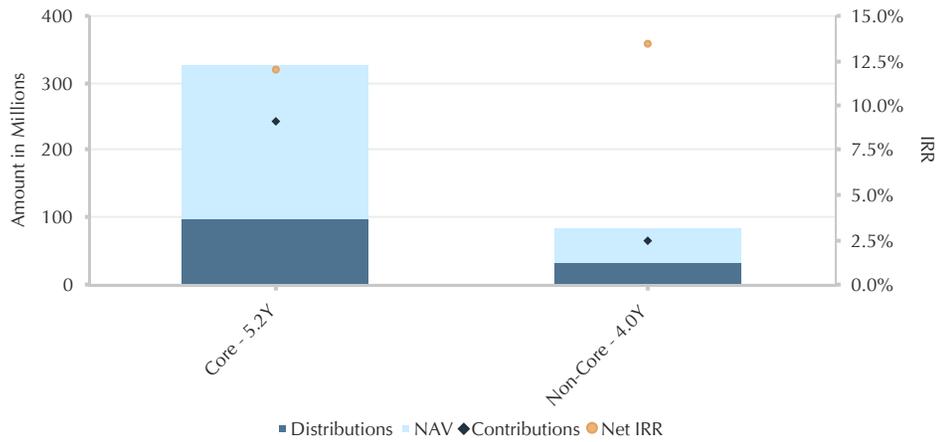


Performance Review by Strategy



Weighted Average Age (WAA) is based on net contributions
 WAA is calculated as the sum of the individual net contributions divided by the overall net contribution and then multiplied by the age

Performance Review by Sub-Strategy



Weighted Average Age (WAA) is based on net contributions
 WAA is calculated as the sum of the individual net contributions divided by the overall net contribution and then multiplied by the age

Performance Statistics

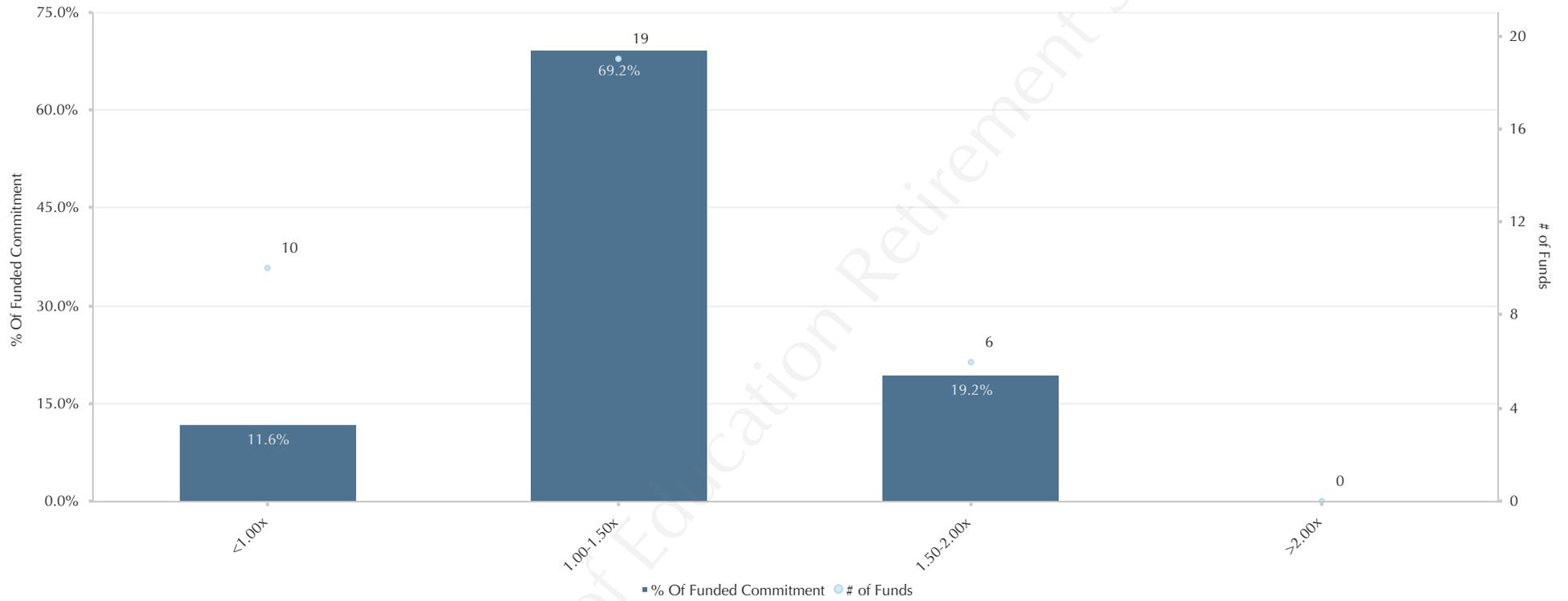
As Of Mar-2023	Mar-2022	Jun-2022	Sep-2022	Dec-2022	Mar-2023	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Mar-2023 Active	Mar-2023 Liquidated
Committed Capital	457.6	482.6	527.6	620.9	682.9	10.0%	10.0%	49.2%	679.9	2.9
Unfunded Commitment	247.1	257.7	284.1	359.7	402.4	11.9%	11.9%	62.9%	402.4	0.0
Net Contributed Capital	210.1	222.1	238.1	260.6	280.9	7.8%	7.8%	33.7%	277.9	2.9
Net Distributed Capital	73.1	89.2	95.1	102.2	106.1	3.8%	3.8%	45.2%	106.1	0.0
Recallable Capital	19.5	19.6	21.3	23.4	23.8	1.7%	1.7%	22.4%	23.8	0.0
Net Asset Value	227.1	224.1	234.5	256.5	280.7	9.4%	9.4%	23.6%	280.7	0.0
Net Gain/Loss	85.7	86.8	86.9	96.1	103.9	8.1%	8.1%	21.3%	103.9	0.0
Total Value	300.2	313.3	329.7	358.7	386.8	7.8%	7.8%	28.9%	386.8	0.0
Total Exposure (mm)	474.2	481.8	518.7	616.2	683.1	10.9%	10.9%	44.1%	683.1	0.0
DPI	0.4x	0.4x	0.4x	0.4x	0.4x	0.0x	0.0x	0.0x	0.4x	0.0x
Total Value to Paid-In (TVPI)	1.4x	1.4x	1.3x	1.3x	1.3x	0.0x	0.0x	0.0x	1.3x	0.0x
Net Internal Rate of Return (IRR)	13.4%	12.7%	12.0%	12.2%	12.2%	0.0%	0.0%	-1.2%	12.2%	-

Total Exposure = Unfunded + NAV

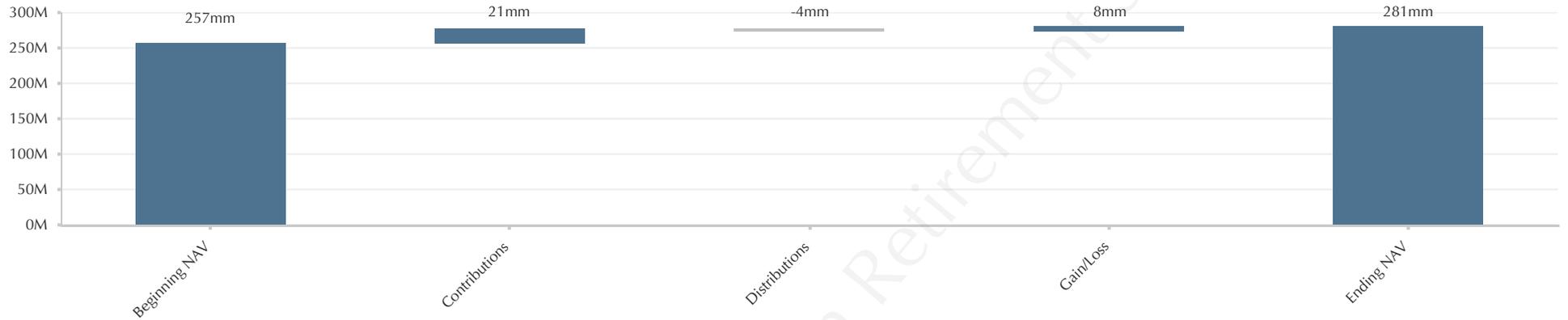
Reporting Period: As Of Mar-2023

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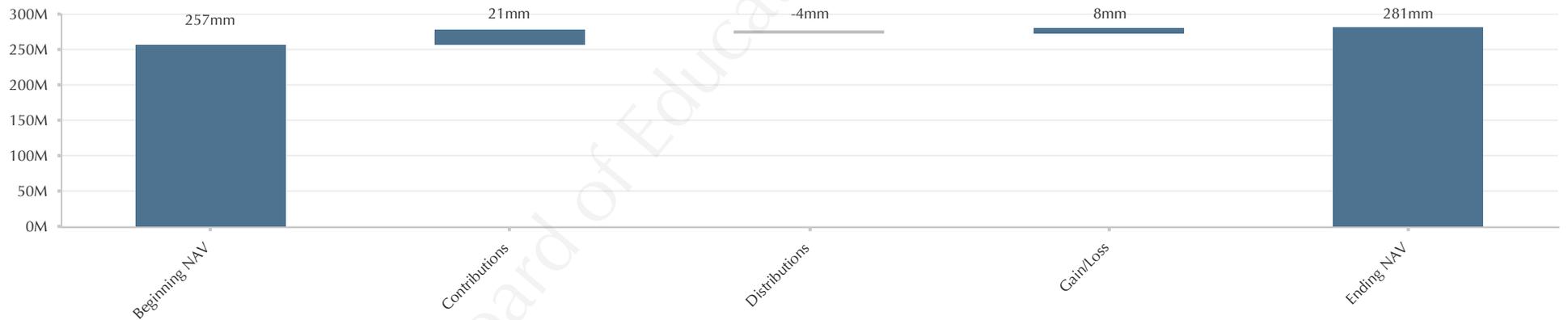
TVPI Distribution



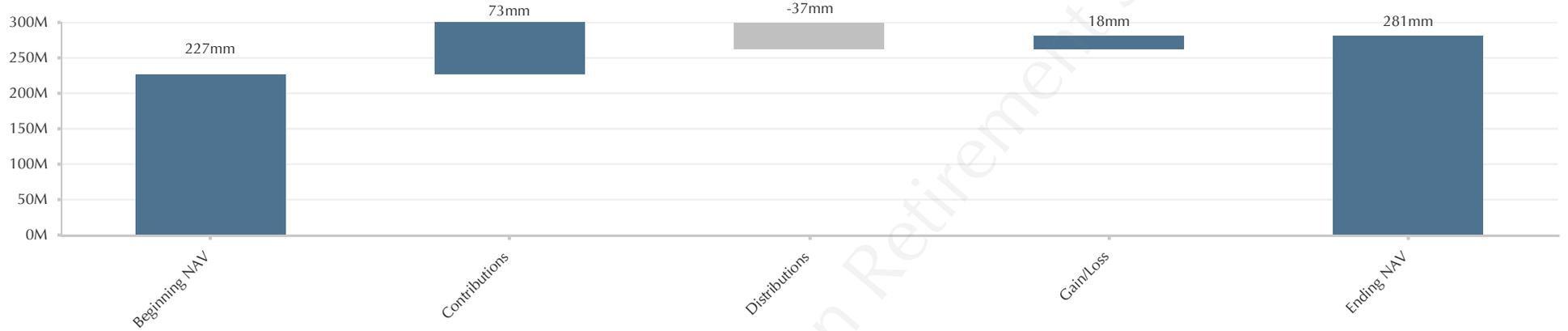
Quarterly Valuation Bridge (Jan-2023 to Mar-2023)



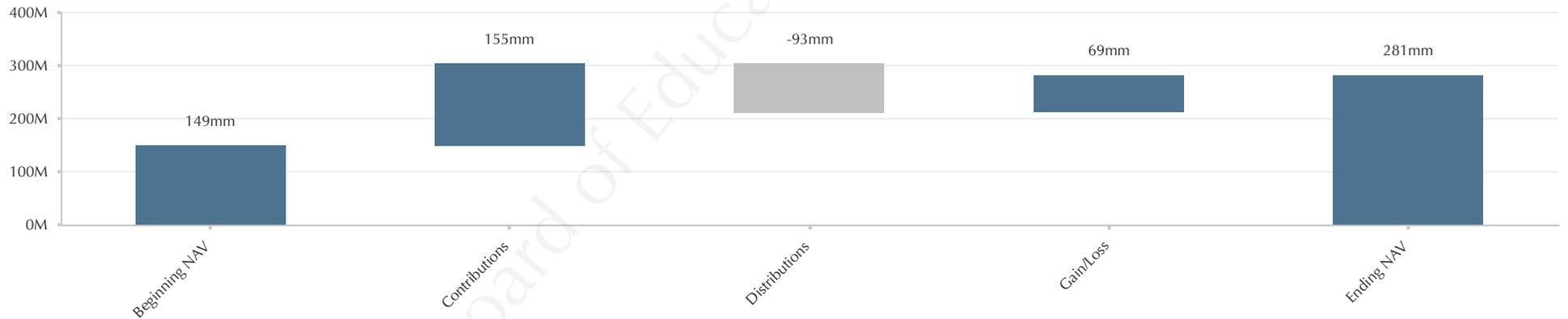
YTD Valuation Bridge (Jan-2023 to Mar-2023)



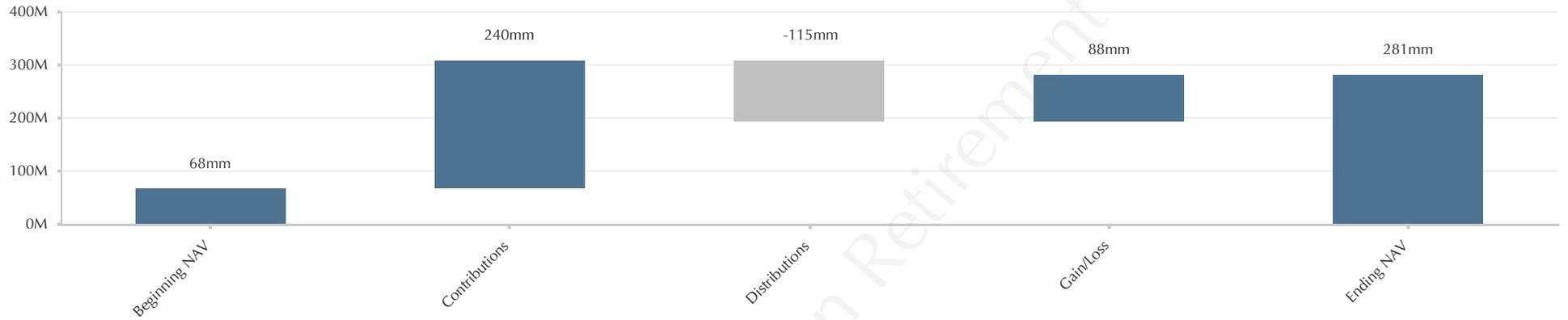
Last 12 Months Valuation Bridge (Apr-2022 to Mar-2023)



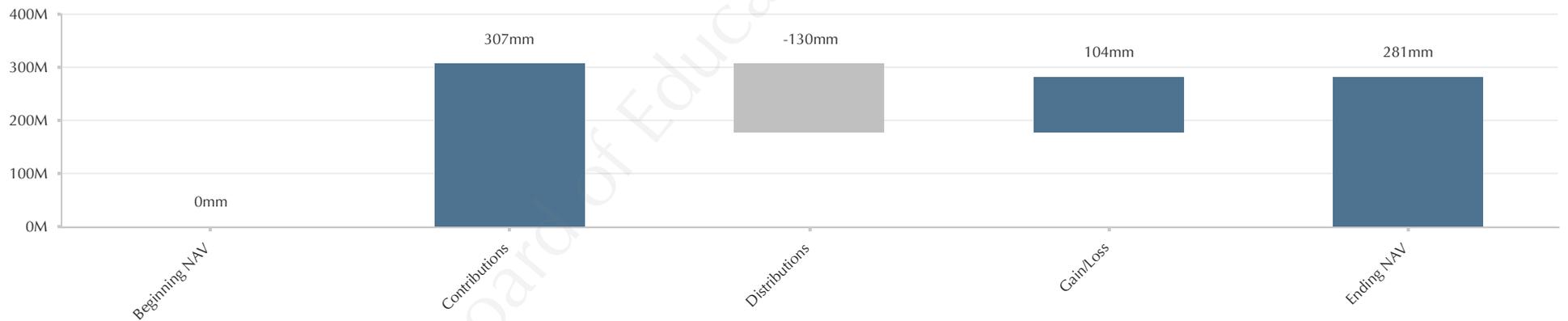
Last 3 Years Valuation Bridge (Apr-2020 to Mar-2023)



Last 5 Years Valuation Bridge (Apr-2018 to Mar-2023)



LTD Valuation Bridge (Nov-2013 to Mar-2023)



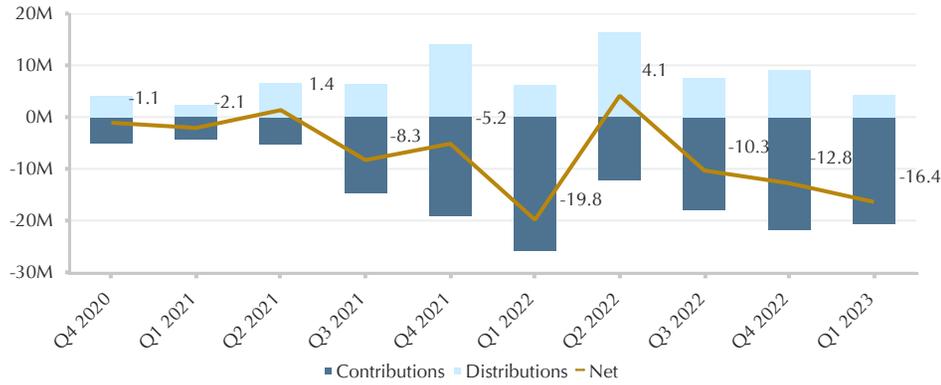
	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Strategy										
Energy	2.8%	52.3	21.4	17.3	32.6	40.4	3.7	7.9	8.1%	1.2x
Infrastructure	97.2%	630.6	285.3	112.6	369.9	642.7	100.2	272.8	12.5%	1.4x
NYCBERS - INFRA	100.0%	682.9	306.7	129.9	402.4	683.1	103.9	280.7	12.2%	1.3x
SubStrategy										
Core	81.6%	552.5	241.5	97.5	327.9	557.0	85.0	229.0	12.0%	1.4x
Non-Core	18.4%	130.4	65.2	32.4	74.5	126.2	18.9	51.7	13.4%	1.3x
NYCBERS - INFRA	100.0%	682.9	306.7	129.9	402.4	683.1	103.9	280.7	12.2%	1.3x

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	-0.3%	120.5	0.0	0.0	122.7	121.7	-0.9	-0.9	n.m.	0.0x
2022	1.4%	104.8	4.2	0.0	100.6	104.6	-0.2	4.0	n.m. ¹	1.0x
2021	15.5%	150.8	44.7	1.4	102.3	145.8	0.2	43.5	n.m. ¹	1.0x
2020	9.2%	60.6	27.3	1.7	34.5	60.5	0.4	26.0	1.3%	1.0x
2019	17.0%	51.3	42.9	6.6	9.3	57.0	11.4	47.7	14.0%	1.3x
2018	18.6%	58.1	49.8	7.4	12.6	64.8	9.7	52.2	9.6%	1.2x
2017	8.2%	33.2	30.6	22.4	5.7	28.7	14.9	23.0	13.3%	1.5x
2016	11.7%	44.6	40.0	25.3	11.7	44.5	18.0	32.8	12.1%	1.5x
2014	15.6%	49.0	57.1	54.7	1.3	45.1	41.5	43.9	14.0%	1.7x
2013	3.1%	10.0	10.1	10.5	1.8	10.3	8.9	8.6	12.9%	1.9x
NYCBERS - INFRA	100.0%	682.9	306.7	129.9	402.4	683.1	103.9	280.7	12.2%	1.3x
Structure										
Co-Investment	3.7%	11.2	8.0	1.0	0.3	10.7	3.4	10.4	14.8%	1.4x
Primary Fund	96.3%	671.7	298.7	128.9	402.2	672.4	100.5	270.3	12.2%	1.3x
NYCBERS - INFRA	100.0%	682.9	306.7	129.9	402.4	683.1	103.9	280.7	12.2%	1.3x
Region										
Global	18.8%	361.4	71.2	43.4	302.7	355.5	25.0	52.8	12.7%	1.4x
North America	14.4%	65.8	39.3	9.0	24.8	65.2	10.1	40.5	9.9%	1.3x
OECD	62.5%	215.1	183.9	77.4	47.8	223.3	69.0	175.5	12.6%	1.4x
Various Europe	3.3%	37.8	9.8	0.2	26.9	36.3	-0.3	9.4	n.m. ¹	1.0x
Western Europe	0.9%	2.8	2.5	0.0	0.3	2.9	0.06	2.6	n.m. ¹	1.0x
NYCBERS - INFRA	100.0%	682.9	306.7	129.9	402.4	683.1	103.9	280.7	12.2%	1.3x

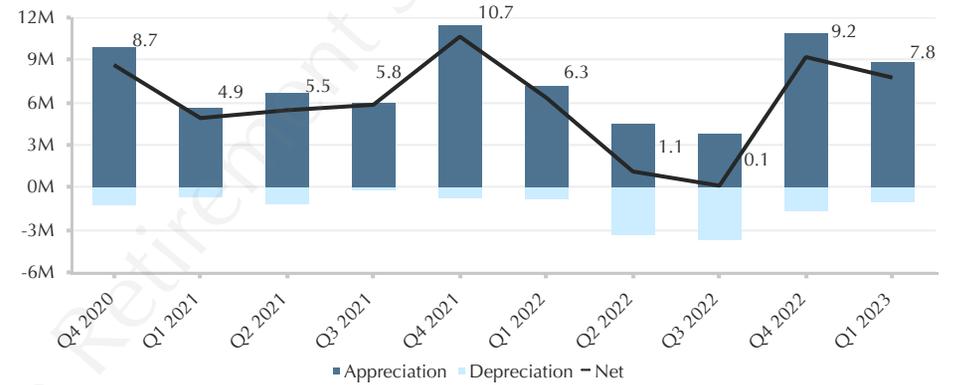
Reporting Period: Jul-2013 - Mar-2023

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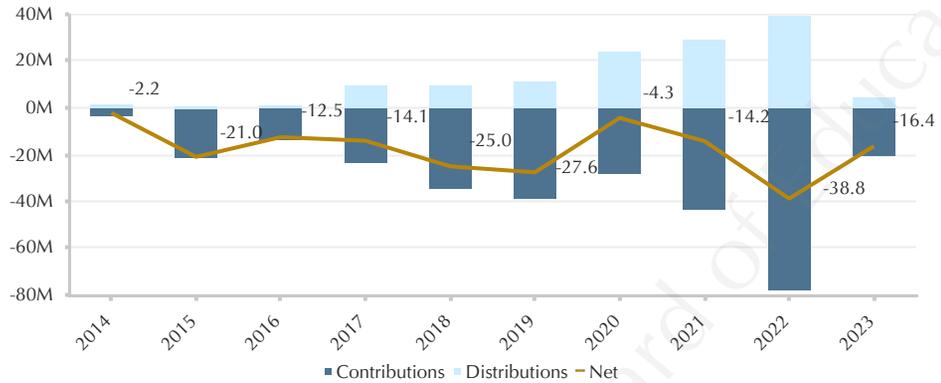
Cash Flows Quarterly



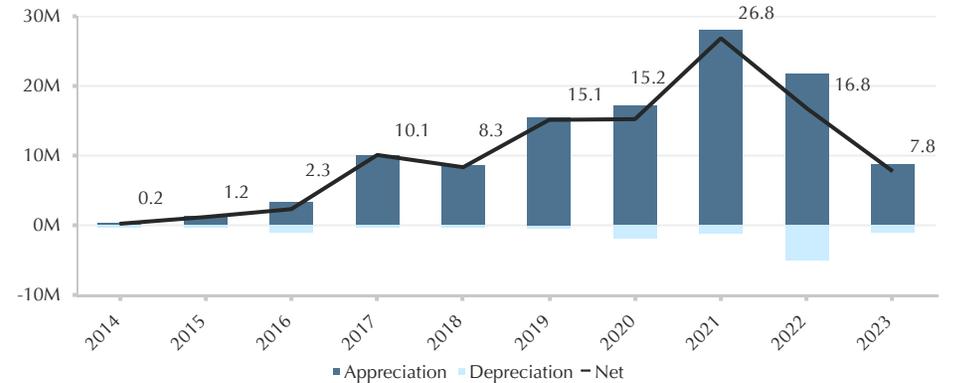
Appreciation/Depreciation Quarterly



Cash Flows Yearly



Appreciation/Depreciation Yearly



Movement By Strategy - QTD

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Energy	0.09	1	-0.1	2	-0.02	-0.3%	0.4	8.7%	0.02	0.1%	7.9
Infrastructure	8.7	23	-0.9	5	7.8	100.3%	4.0	91.3%	20.7	99.9%	272.8
Total	8.8	24	-1.0	7	7.8	100.0%	4.3	100.0%	20.7	100.0%	280.7

Above reporting references both active and closed funds

Reporting Period: Jan-2023 - Mar-2023

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Gain

	Strategy	Vintage Year	Region	Appreciation (mm)
EQT Infrastructure V	Infrastructure	2020	Global	1.1
IFM Global Infrastructure Fund	Infrastructure	2014	OECD	1.1
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	1.0
KKR Global Infrastructure Investors III	Infrastructure	2018	OECD	0.9
EQT Infrastructure IV - USD Fund	Infrastructure	2018	OECD	0.7
Total				4.8

Loss

	Strategy	Vintage Year	Region	Depreciation (mm)
Brookfield Infrastructure Fund V-B	Infrastructure	2023	Global	-0.5
Global Energy & Power Infrastructure Fund II	Infrastructure	2014	OECD	-0.2
BlackRock Global Infrastructure Fund IV D	Infrastructure	2022	Global	-0.1
DIF Infrastructure VII	Infrastructure	2023	Global	-0.09
Actis Energy 4	Energy	2016	Global	-0.08
Total				-1.0

Contributions

	Strategy	Vintage Year	Region	Contributions (mm)
InfraVia European Fund V	Infrastructure	2021	Various Europe	5.8
EQT Infrastructure V	Infrastructure	2020	Global	4.8
Stonepeak Infrastructure Fund IV	Infrastructure	2021	North America	3.0
Brookfield Infrastructure Fund IV	Infrastructure	2019	OECD	2.3
Global Energy & Power Infrastructure Fund III F	Infrastructure	2019	OECD	2.2
Total				18.1

Distributions

	Strategy	Vintage Year	Region	Distributions (mm)
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	1.3
ASF VII Infrastructure	Infrastructure	2016	OECD	0.5
NYCRS EIG Energy Partners	Energy	2017	North America	0.4
Brookfield Infrastructure Fund IV	Infrastructure	2019	OECD	0.3
ASF VIII Infrastructure B	Infrastructure	2021	Global	0.3
Total				2.8

Above reporting references both active and closed funds
Each category displays maximum 5 positions

Movement By Strategy - LTM

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Energy	1.8	2	-1.2	1	0.6	3.4%	11.5	30.7%	5.8	8.0%	7.9
Infrastructure	21.4	19	-3.9	9	17.6	96.6%	25.9	69.3%	66.9	92.0%	272.8
Total	23.3	21	-5.0	10	18.2	100.0%	37.4	100.0%	72.8	100.0%	280.7

Above reporting references both active and closed funds

Reporting Period: Apr-2022 - Mar-2023

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Gain

	Strategy	Vintage Year	Region	Appreciation (mm)
IFM Global Infrastructure Fund	Infrastructure	2014	OECD	2.6
KKR Global Infrastructure Investors III	Infrastructure	2018	OECD	2.6
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	2.5
EQT Infrastructure V	Infrastructure	2020	Global	2.3
Brookfield Infrastructure Fund IV	Infrastructure	2019	OECD	1.9
Total				11.8

Loss

	Strategy	Vintage Year	Region	Depreciation (mm)
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	-1.9
Actis Energy 5	Energy	2020	Global	-1.2
DIF Infrastructure VII	Infrastructure	2023	Global	-0.6
Global Energy & Power Infrastructure Fund II	Infrastructure	2014	OECD	-0.4
Brookfield Infrastructure Fund V-B	Infrastructure	2023	Global	-0.3
Total				-4.5

Contributions

	Strategy	Vintage Year	Region	Contributions (mm)
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	14.7
EQT Infrastructure V	Infrastructure	2020	Global	9.6
Stonepeak Infrastructure Fund IV	Infrastructure	2021	North America	6.3
InfraVia European Fund V	Infrastructure	2021	Various Europe	6.0
Global Energy & Power Infrastructure Fund III F	Infrastructure	2019	OECD	5.2
Total				41.7

Distributions

	Strategy	Vintage Year	Region	Distributions (mm)
Actis Energy 4	Energy	2016	Global	9.7
EQT Infrastructure III	Infrastructure	2017	Global	8.3
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	2.9
Global Infrastructure Partners III	Infrastructure	2016	OECD	2.7
NYCRS EIG Energy Partners	Energy	2017	North America	1.8
Total				25.5

Above reporting references both active and closed funds
Each category displays maximum 5 positions

Top 5 GP Relationships

	Total Commitments (\$mm)	Total Exposure (\$mm)	% of Portfolio (Total Exposure)	Contributions (\$mm)	Distributions (\$mm)	Number of Holdings	Net TVPI
EQT Partners AB	92.8	95.1	13.9%	50.9	19.3	5	1.3x
Brookfield Asset Management	87.9	94.1	13.8%	39.4	17.5	6	1.5x
ARDIAN Investment UK Limited	69.5	71.3	10.4%	26.2	4.8	4	1.3x
Global Infrastructure Management LLC	64.6	68.7	10.1%	29.7	5.9	3	1.2x
KKR Financial	69.6	58.2	8.5%	49.3	33.1	3	1.4x
GP Relationships Top(5)	384.4	387.4	56.7%	195.4	80.6	21	1.3x
GP Relationships Remaining(9)	298.5	295.7	43.3%	111.3	49.3	14	1.3x
Total Portfolio (14)	682.9	683.1	100.0%	306.7	129.9	35	1.3x

Top managers by exposure (NAV + Unfunded) and reflective of both current and closed holdings.
Total Exposure = Unfunded + NAV

Reporting Period: As Of Mar-2023

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	First Cash Flow Date	QTD	1Y	3Y	5Y	10Y	ITD
EQT Partners AB	Oct-2017	4.8%	5.9%	17.2%	14.9%	15.0%	15.0%
Brookfield Asset Management	Nov-2013	1.4%	9.8%	14.7%	12.6%	12.7%	12.7%
ARDIAN Investment UK Limited	May-2017	2.7%	10.6%	16.1%	14.9%	15.4%	15.4%
Global Infrastructure Management LLC	May-2016	1.3%	7.2%	15.5%	10.6%	9.3%	9.3%
KKR Financial	Aug-2015	6.6%	11.6%	11.8%	15.1%	14.3%	14.3%
GP Relationships Top(5)		3.4%	8.7%	15.0%	13.7%	13.3%	13.3%
GP Relationships Remaining(9)		2.0%	5.9%	9.2%	8.4%	10.7%	10.7%
Total Portfolio (14)		2.9%	7.7%	12.8%	11.6%	12.2%	12.2%

Above reporting references both active and closed funds

Portfolio IRR vs Benchmarks

PERFORMANCE VERSUS BENCHMARKS					
3/31/2023	1 QTR	1 YEAR	3 YEAR	5 YEAR	INCEPTION
Program IRR	2.9%	7.7%	12.8%	11.6%	12.2%
50% Russell 3000 & 50% Barclays U.S. Aggregate PME+	5.1%	-4.7%	6.5%	5.3%	5.4%
<i>Difference</i>	-2.2%	12.5%	6.4%	6.3%	6.8%
CPI +400bps	8.0%	8.0%	8.0%	8.0%	8.0%
<i>Difference</i>	-5.1%	-0.3%	4.8%	3.6%	4.2%
CPI +400bps PME+	2.0%	8.8%	9.5%	8.3%	8.0%
<i>Difference</i>	0.9%	-1.0%	3.3%	3.3%	4.2%

Per BERS' Investment Policy Statement, the performance benchmark for the Infrastructure Portfolio is to meet or exceed the Consumer Price Index ("CPI") plus 4% net of fees over a 5-year rolling period. To be consistent with this definition, the 5Y return is used across all time periods.

Reporting Period: As Of Mar-2023

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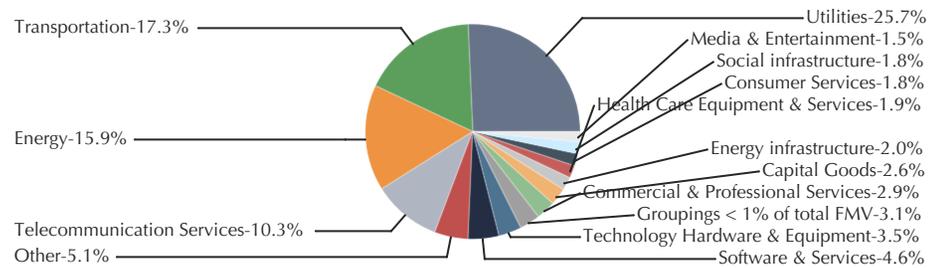
	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Strategy								
Energy	21.4	17.3	7.9	3.7	1.2x	0.8x	0.4x	8.1%
Infrastructure	285.3	112.6	272.8	100.2	1.4x	0.4x	1.0x	12.5%
SubStrategy								
Non-Core	65.2	32.4	51.7	18.9	1.3x	0.5x	0.8x	13.4%
Core	241.5	97.5	229.0	85.0	1.4x	0.4x	0.9x	12.0%
Vintage								
2023	0.0	0.0	-0.9	-0.9	0.0x	0.0x	0.0x	n.m.
2022	4.2	0.0	4.0	-0.2	1.0x	0.0x	1.0x	n.m. ¹
2021	44.7	1.4	43.5	0.2	1.0x	0.0x	1.0x	n.m. ¹
2020	27.3	1.7	26.0	0.4	1.0x	0.1x	1.0x	1.3%
2019	42.9	6.6	47.7	11.4	1.3x	0.2x	1.1x	14.0%
2018	49.8	7.4	52.2	9.7	1.2x	0.1x	1.0x	9.6%
2017	30.6	22.4	23.0	14.9	1.5x	0.7x	0.8x	13.3%
2016	40.0	25.3	32.8	18.0	1.5x	0.6x	0.8x	12.1%
2014	57.1	54.7	43.9	41.5	1.7x	1.0x	0.8x	14.0%
2013	10.1	10.5	8.6	8.9	1.9x	1.0x	0.8x	12.9%

	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Structure								
Co-Investment	8.0	1.0	10.4	3.4	1.4x	0.1x	1.3x	14.8%
Primary Fund	298.7	128.9	270.3	100.5	1.3x	0.4x	0.9x	12.2%
Region								
Western Europe	2.5	0.0	2.6	0.06	1.0x	0.0x	1.0x	n.m. ¹
Various Europe	9.8	0.2	9.4	-0.3	1.0x	0.0x	1.0x	n.m. ¹
North America	39.3	9.0	40.5	10.1	1.3x	0.2x	1.0x	9.9%
Global	71.2	43.4	52.8	25.0	1.4x	0.6x	0.7x	12.7%
OECD	183.9	77.4	175.5	69.0	1.4x	0.4x	1.0x	12.6%
NYCBERS - INFRA	306.7	129.9	280.7	103.9	1.3x	0.4x	0.9x	12.2%

¹ IRR not meaningful for investments held less than 24 months

* Total figures take into account all current and closed portfolio positions as at Mar-2023

Industry Group Exposure by FMV



	Total Invested Capital	% of Total	Fair Market Value	% of Total
Utilities	89,200,262	27.7%	88,340,923	25.7%
Transportation	49,560,330	15.4%	59,517,097	17.3%
Energy	56,561,475	17.5%	54,832,710	15.9%
Telecommunication Services	33,847,448	10.5%	35,497,210	10.3%
Other	15,539,286	4.8%	17,373,189	5.1%
Software & Services	14,179,822	4.4%	15,911,744	4.6%
Technology Hardware & Equipment	8,864,527	2.7%	11,875,606	3.5%
Commercial & Professional Services	8,466,662	2.6%	10,005,101	2.9%
Capital Goods	6,398,886	2.0%	8,895,483	2.6%
Energy infrastructure	6,177,413	1.9%	6,899,826	2.0%
Health Care Equipment & Services	6,225,339	1.9%	6,436,879	1.9%
Consumer Services	5,187,508	1.6%	6,275,411	1.8%
Social infrastructure	5,264,805	1.6%	6,140,469	1.8%
Media & Entertainment	7,599,554	2.4%	5,242,700	1.5%
Groupings < 1% of total FMV	9,290,754	2.9%	10,627,485	3.1%

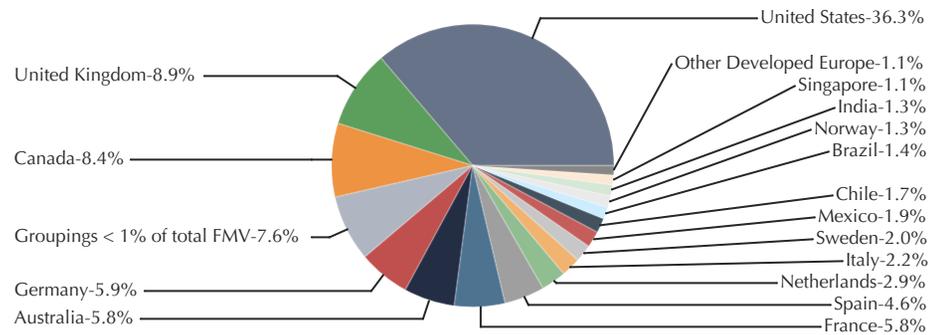
Total Invested Capital represents all investments made since inception and includes any recycled capital.

Position Analytics data based on GP provided information as of Mar-2023

Reporting Period: As Of Mar-2023

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Country Exposure by FMV



	Total Invested Capital	% of Total	Fair Market Value	% of Total
United States	114,933,254	35.7%	124,668,706	36.3%
United Kingdom	26,061,792	8.1%	30,647,809	8.9%
Canada	24,316,581	7.5%	28,979,737	8.4%
Germany	23,731,699	7.4%	20,322,759	5.9%
Australia	17,771,083	5.5%	19,988,740	5.8%
France	18,313,673	5.7%	19,854,588	5.8%
Spain	15,382,355	4.8%	15,885,637	4.6%
Netherlands	10,819,176	3.4%	9,814,724	2.9%
Italy	5,537,454	1.7%	7,599,961	2.2%
Sweden	4,110,615	1.3%	6,809,335	2.0%
Mexico	8,863,007	2.7%	6,383,430	1.9%
Chile	6,928,955	2.1%	5,724,357	1.7%
Brazil	6,149,175	1.9%	4,676,047	1.4%
Norway	4,260,992	1.3%	4,579,423	1.3%
India	5,427,732	1.7%	4,300,010	1.3%
Singapore	2,189,914	0.7%	3,887,370	1.1%
Other Developed Europe	3,244,661	1.0%	3,637,251	1.1%
Groupings < 1% of total FMV	24,321,950	7.5%	26,111,948	7.6%

Total Invested Capital represents all investments made since inception and includes any recycled capital.

Position Analytics data based on GP provided information as of Mar-2023

Investment Name	Investment Date	Holding Period	Country	Region	Sector	Public Company	Total Invested Capital	Distributed Capital	Current Cost	Fair Market Value	TVPI	GICS Sector	GICS Sub-Sector
Sydney Airport Corporation Limited	Mar-2022	1.0	Australia	Asia Australia	Industrials	No	\$12.5mm	\$0.2mm	\$12.5mm	\$13.4mm	1.1x	Transportation	Airport Services
CyrusOne LLC	Mar-2022	1.0	United States	North America	Communication Services	No	\$9.1mm	\$0.0mm	\$9.1mm	\$9.7mm	1.1x	Telecom	Diversified Telecommunication Services
MAP Energy, LLC	Dec-2020	2.3	United States	North America	Energy	No	\$5.3mm	\$0.3mm	\$5.1mm	\$7.8mm	0.0x	Renewables	Renewable Electricity
Signature Aviation plc	Jun-2021	1.8	United Kingdom	Europe	Industrials	No	\$5.0mm	\$0.0mm	\$5.0mm	\$7.5mm	1.6x	Transportation	Airport Services
wpd AG	Mar-2022	1.1	Germany	Europe	Energy	No	\$8.3mm	\$0.0mm	\$8.3mm	\$7.4mm	0.9x	Renewables	Renewable Electricity
GlobalConnect AB	Jan-2017	4.6	Sweden	Europe	Communication Services	No	\$3.1mm	\$0.1mm	\$3.1mm	\$5.8mm	1.9x	Telecom	None Specified
Suez SA	Jan-2022	1.1	France	Europe	Utilities	No	\$4.7mm	\$0.0mm	\$4.7mm	\$5.5mm	1.2x	Utilities	Water Utilities
Genesee & Wyoming, Inc.	Dec-2019	3.3	United States	North America	Industrials	No	\$3.7mm	\$0.5mm	\$3.7mm	\$5.3mm	1.6x	Transportation	Highways and Railtracks
EdgeConneX Inc.	Nov-2020	2.0	United States	North America	Information Technology	No	\$3.4mm	\$0.2mm	\$3.4mm	\$5.3mm	1.6x	Telecom	Internet Services and Infrastructure
Jupiter Power LLC	Dec-2022	0.3	United States	North America	Utilities	No	\$5.2mm	\$0.0mm	\$5.2mm	\$5.3mm	-	Utilities	Power Producers and Energy Traders
Zayo Group, LLC	Mar-2020	3.0	United States	North America	Information Technology	No	\$3.8mm	\$0.0mm	\$3.8mm	\$4.9mm	1.3x	Telecom	Alternative Carriers
Buckeye Partners, L.P.	Nov-2019	3.2	United States	North America	Energy	No	\$2.7mm	-\$0.1mm	\$2.7mm	\$4.6mm	1.7x	Midstream	Oil and Gas Storage and Transportation
EnerCare, Inc.	Oct-2018	4.3	Canada	North America	Utilities	No	\$3.2mm	\$0.9mm	\$3.2mm	\$4.6mm	1.7x	Utilities	Specialized Consumer Services
Robin - ASF	Sep-2021	1.3	United States	North America	Other	No	\$4.1mm	\$0.6mm	-	\$4.5mm	1.2x	Other	None Specified
ITR Concession Co. LLC	May-2015	7.6	United States	North America	Industrials	No	\$2.5mm	\$2.0mm	\$2.5mm	\$4.5mm	2.6x	Transportation	Highways and Railtracks
Aleatica S.A.	Apr-2015	7.7	Mexico	Latin America	Industrials	Yes	\$3.4mm	\$0.9mm	\$3.4mm	\$4.3mm	1.5x	Transportation	Highways and Railtracks
VTG AG	Dec-2022	0.2	Germany	Europe	Industrials	No	\$4.2mm	\$0.0mm	\$4.2mm	\$4.2mm	1.0x	Transportation	Highways and Railtracks
Naturgy Energy Group S.A.	Sep-2016	4.0	Spain	Europe	Utilities	Yes	\$3.2mm	\$1.3mm	\$3.0mm	\$4.2mm	1.7x	Utilities	Gas Utilities
Atlas Renewable Energy Chile SpA	Dec-2016	2.0	Chile	Latin America	Utilities	No	\$5.7mm	\$3.2mm	\$4.0mm	\$4.0mm	1.3x	Utilities	Renewable Electricity

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Investment Name	Investment Date	Holding Period	Country	Region	Sector	Public Company	Total Invested Capital	Distributed Capital	Current Cost	Fair Market Value	TVPI	GICS Sector	GICS Sub-Sector
DELTA Fiber Nederland B.V.	Feb-2017	1.8	Netherlands	Europe	Communication Services	No	\$4.3mm	\$2.4mm	\$3.5mm	\$3.8mm	1.4x	Telecom	Internet Services and Infrastructure
Total	Apr-2015	2.1	-	-	-	-	\$97.4mm	\$12.6mm	\$90.3mm	\$116.6mm	1.3x	-	-

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NYC BERS Infrastructure Portfolio as of Q1 2023									
Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Unfunded Commitment	Market Value	TVPI	IRR
Active Investments:									
2016	Actis Energy 4	12/16/2016	\$ 10,600,000	\$ 10,614,756	\$ 13,178,736	\$ 4,020,392	\$ 2,014,000	1.43	14.02%
2020	Actis Energy 5	6/30/2020	\$ 27,000,000	\$ 3,657,487	\$ -	\$ 23,342,513	\$ 1,649,000	0.45	n.m.
2019	Ardian Infrastructure Fund V B	3/4/2019	\$ 14,737,491	\$ 9,678,444	\$ 375,251	\$ 4,368,117	\$ 11,549,929	1.23	15.89%
2022	Ardian Infra Fund V Co-Invest Lemon	12/22/2022	\$ 2,754,960	\$ 2,514,917	\$ -	\$ 281,814	\$ 2,572,920	1.02	n.m.
2016	ASF VII Infrastructure	4/24/2017	\$ 12,000,000	\$ 9,317,359	\$ 3,621,120	\$ 2,896,794	\$ 9,996,345	1.46	15.72%
2021	ASF VIII Infrastructure B	11/1/2021	\$ 40,000,000	\$ 4,655,297	\$ 822,029	\$ 35,366,848	\$ 4,313,597	1.10	n.m.
2017	Axiom Infrastructure North America	8/14/2017	\$ 12,221,338	\$ 12,776,935	\$ 3,798,213	\$ -	\$ 13,656,608	1.37	8.61%
2022	Basalt Infrastructure Partners IV A	10/7/2022	\$ 45,000,000	\$ -	\$ -	\$ 45,000,000	\$ -	0.00	n.m.
2022	BlackRock Global Infrastructure Fund IV D	6/30/2022	\$ 25,000,000	\$ 1,640,515	\$ -	\$ 23,359,485	\$ 1,405,212	0.86	n.m.
2013	Brookfield Infrastructure Fund II	7/8/2013	\$ 10,000,000	\$ 10,112,253	\$ 10,491,582	\$ 1,769,027	\$ 8,563,742	1.88	12.87%
2016	Brookfield Infrastructure Fund III	4/15/2016	\$ 10,000,000	\$ 7,849,550	\$ 2,766,200	\$ 3,457,532	\$ 8,303,791	1.41	10.47%
2019	Brookfield Infrastructure Fund IV	5/10/2019	\$ 19,000,000	\$ 17,544,959	\$ 3,338,862	\$ 2,189,483	\$ 19,270,231	1.29	13.41%
2019	Brookfield Infrastructure Fund IV (BIF IV): Co-Invest	10/22/2019	\$ 2,000,000	\$ 2,010,258	\$ 287,147	\$ -	\$ 2,883,393	1.58	15.48%
2023	Brookfield Infrastructure Fund V-B	7/18/2022	\$ 45,000,000	\$ -	\$ -	\$ 45,000,000	\$ (312,743)	0.00	n.m.
2018	Cardinal NR Sidecar Holdings	10/11/2018	\$ 1,880,001	\$ 1,892,698	\$ 625,014	\$ 1	\$ 2,960,819	1.89	17.49%
2023	DIF Infrastructure VII	11/15/2022	\$ 45,535,600	\$ -	\$ -	\$ 47,691,600	\$ (634,322)	0.00	n.m.
2017	EQT Infrastructure III	2/21/2017	\$ 9,214,756	\$ 10,613,949	\$ 14,542,266	\$ 520,371	\$ 5,141,571	1.85	20.86%
2018	EQT Infrastructure IV - USD Fund	12/20/2018	\$ 18,000,000	\$ 16,655,736	\$ 3,021,050	\$ 3,456,907	\$ 18,541,961	1.29	11.55%
2020	EQT Infrastructure IV Co-Investment (Saber)	3/1/2020	\$ 1,600,000	\$ 1,616,000	\$ 97,112	\$ -	\$ 1,981,241	1.29	8.85%
2020	EQT Infrastructure V	10/29/2020	\$ 32,000,000	\$ 22,023,368	\$ 1,591,360	\$ 11,178,046	\$ 22,328,729	1.09	n.m.
2022	EQT Infrastructure VI	3/1/2023	\$ 32,000,000	\$ -	\$ -	\$ 32,000,000	\$ -	0.00	n.m.
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$ 15,000,000	\$ 16,361,179	\$ 16,226,890	\$ 447,407	\$ 5,019,726	1.30	13.83%
2019	Global Energy & Power Infrastructure Fund III F	7/3/2018	\$ 15,600,000	\$ 13,687,178	\$ 2,568,482	\$ 2,711,647	\$ 14,040,823	1.21	13.42%
2016	Global Infrastructure Partners III	1/29/2016	\$ 12,000,000	\$ 12,266,959	\$ 5,712,356	\$ 1,302,516	\$ 12,480,131	1.48	10.38%
2018	Global Infrastructure Partners IV	3/11/2019	\$ 22,600,000	\$ 17,396,584	\$ 188,139	\$ 6,446,285	\$ 18,428,370	1.07	5.90%
2023	Global Infrastructure Partners V	3/31/2023	\$ 30,000,000	\$ -	\$ -	\$ 30,000,000	\$ -	0.00	n.m.
2014	IFM Global Infrastructure Fund	1/2/2014	\$ 15,000,000	\$ 20,027,335	\$ 9,102,969	\$ -	\$ 29,957,687	1.95	11.71%
2021	InfraVia European Fund V	3/1/2022	\$ 37,825,000	\$ 9,824,687	\$ 185,124	\$ 26,906,083	\$ 9,388,674	0.97	n.m.
2014	KKR Global Infrastructure Investors II	6/12/2015	\$ 19,000,000	\$ 20,702,336	\$ 29,367,943	\$ 803,500	\$ 8,891,822	1.85	18.05%
2018	KKR Global Infrastructure Investors III	3/29/2018	\$ 15,600,000	\$ 13,900,906	\$ 3,544,601	\$ 2,664,220	\$ 12,284,995	1.14	6.42%
2021	KKR Global Infrastructure Investors IV	5/24/2021	\$ 35,000,000	\$ 14,697,804	\$ 185,486	\$ 20,491,765	\$ 13,040,175	0.90	n.m.
2017	NYCRS EIG Energy Partners	8/14/2017	\$ 11,760,000	\$ 7,161,808	\$ 4,106,278	\$ 5,197,603	\$ 4,196,532	1.16	7.62%
2021	Stonepeak Infrastructure Fund IV	2/16/2021	\$ 35,000,000	\$ 15,505,574	\$ 171,207	\$ 19,568,852	\$ 16,773,781	1.09	n.m.
Total			\$ 682,869,146	\$ 306,706,831	\$ 129,915,416	\$ 402,438,808	\$ 280,688,740	1.34	12.23%

Risk Quarterly Report (Public):

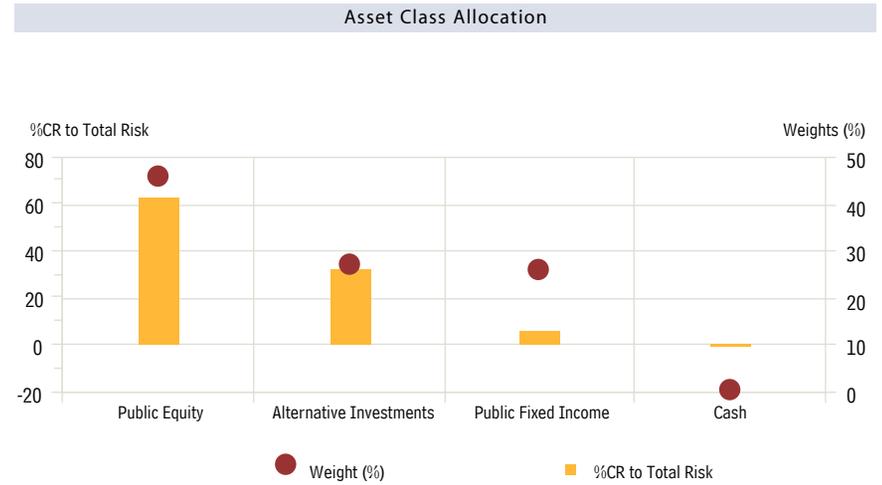
BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

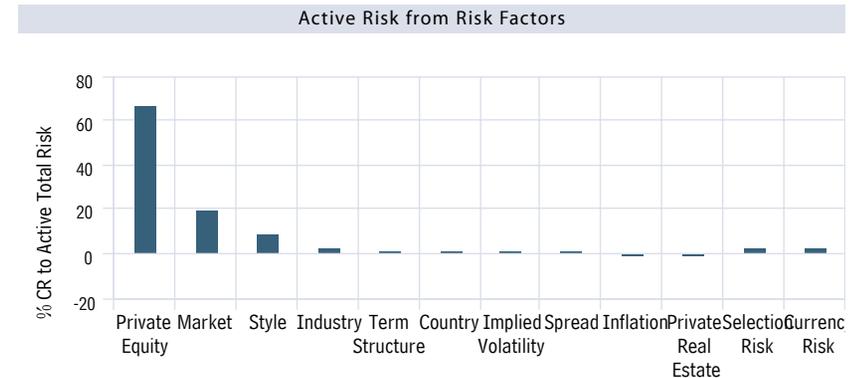
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	13.01	Total	8,413,662,415	100.00	13.01	13.01	100.00
Benchmark Risk	11.71	Public Equity	3,877,504,444	46.09	18.02	8.12	62.40
Active Risk	2.46	Alternative Investments	2,271,546,187	27.00	16.59	4.19	32.22
Portfolio Beta	1.10	Public Fixed Income	2,217,094,827	26.35	5.17	0.70	5.38
Effective Duration	1.55	Cash	47,516,957	0.56	0.05	-0.00	-0.00



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	13.01	100.00	1.00	2.46	100.00	1.00
Local Market Risk	12.44	95.57	1.00	2.39	97.09	1.00
Common Factor Risk	12.40	95.25	1.00	2.32	94.13	0.98
Private Real Estate	0.79	6.04	0.71	-0.04	-1.68	-0.13
Implied Volatility	0.02	0.15	0.44	0.00	0.01	0.19
Industry	0.11	0.82	0.19	0.07	2.76	0.24
Inflation	0.06	0.49	0.42	-0.02	-0.81	-0.18
Market	10.05	77.19	0.97	0.47	18.98	0.49
Private Equity	0.31	2.37	0.15	1.63	66.27	0.81
Spread	0.66	5.07	0.71	0.00	0.00	0.00
Style	0.27	2.09	0.64	0.20	8.28	0.43
Term Structure	0.14	1.04	0.09	0.01	0.28	0.08
Selection Risk	0.04	0.32	0.06	0.07	2.96	0.17
Currency Risk	0.58	4.43	0.56	0.07	2.91	0.30



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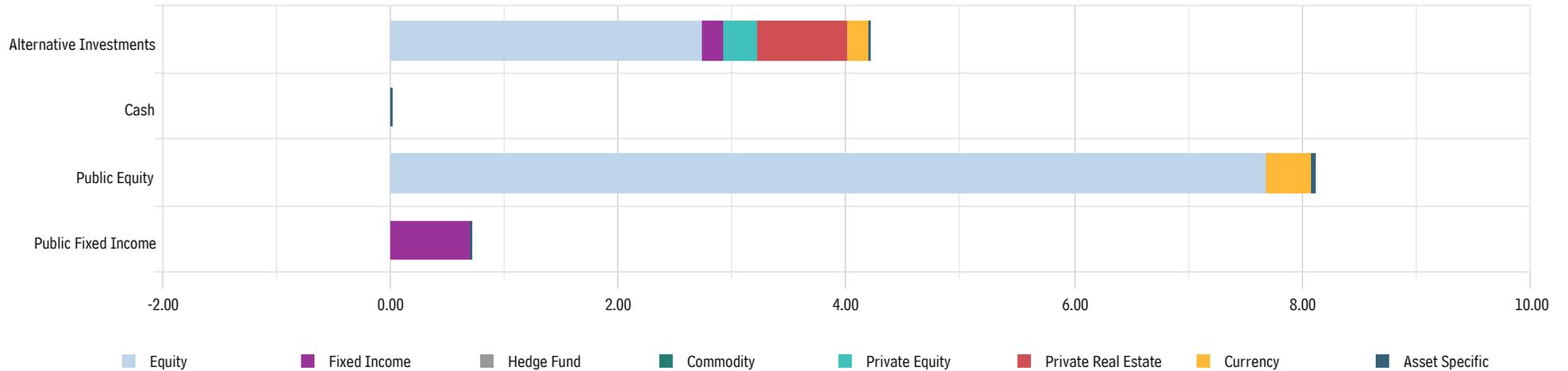
BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Risk Contribution Breakdown by Risk Type

Asset Name	Mkt Value	Weight (%)	Eff Weight (%)	Total Risk	%CR to Total Risk	Port Risk Contribution	Risk Contribution								
							Equity	Fixed Income	Hedge Fund	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific	
Total	8,413,662,415	100.00	-	13.01	100.00	13.01	10.42	0.88	0.00	0.00	0.00	0.79	0.31	0.58	0.04
Alternative Investments	2,271,546,187	27.00	-	16.59	32.22	4.19	2.73	0.18	0.00	0.00	0.00	0.79	0.31	0.18	0.00
Cash	47,516,957	0.56	-	0.05	-0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Equity	3,877,504,444	46.09	-	18.02	62.40	8.12	7.69	-0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.04
Public Fixed Income	2,217,094,827	26.35	-	5.17	5.38	0.70	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00



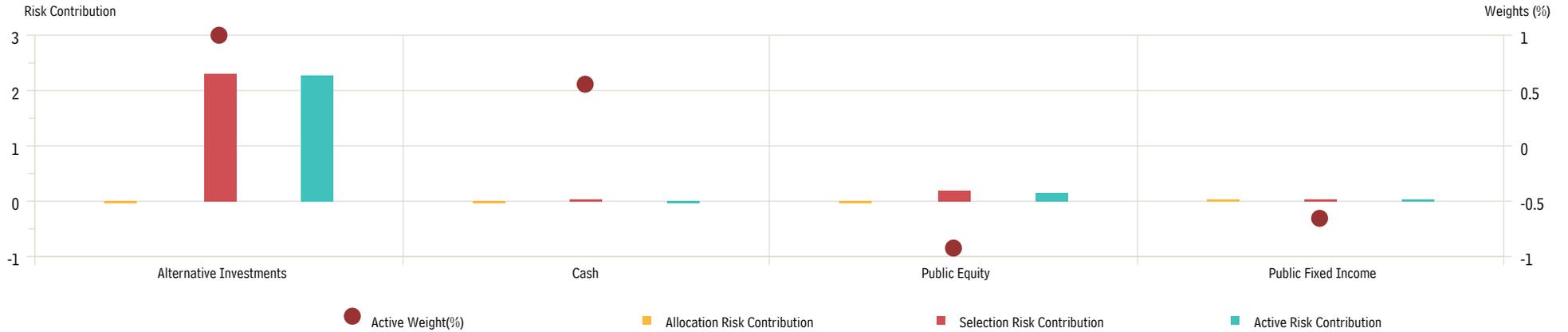
BarraOne Total Plan Summary

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 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active	
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution	
Active Total Risk				-0.04			2.50	2.46	
Alternative Investments	1.00	3.59	-0.24	-0.01	8.69	0.98	2.30	2.29	
Cash	0.56	11.72	-0.46	-0.03	0.28	0.06	0.00	-0.03	
Public Equity	-0.91	6.23	0.49	-0.03	1.14	0.37	0.20	0.17	
Public Fixed Income	-0.65	10.04	-0.44	0.03	0.18	0.18	0.01	0.04	



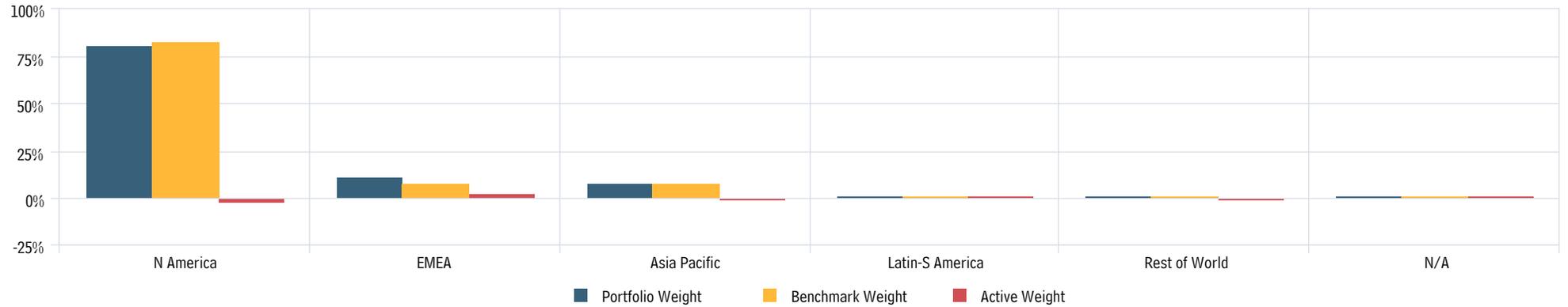
BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	13.01	2.46	100.00	0.02
N America	80.64	83.10	-2.46	12.63	2.10	85.48	0.01
EMEA	10.64	7.97	2.67	18.70	0.34	13.85	0.04
Asia Pacific	7.56	7.92	-0.36	16.66	0.01	0.57	0.01
Latin-S America	0.60	0.57	0.03	22.45	-0.00	-0.18	0.03
Rest of World	0.38	0.43	-0.05	8.24	0.00	0.07	-0.03
N/A	0.18	0.00	0.17	17.37	0.01	0.21	0.03



BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	13.01	2.46	100.00	0.02
United States	78.39	81.19	-2.80	12.61	2.04	82.82	0.01
United Kingdom	2.42	1.81	0.61	19.07	0.10	4.07	0.03
China International	1.64	1.48	0.16	27.25	-0.01	-0.48	0.02
Germany	1.38	0.84	0.54	21.06	0.04	1.56	0.05
Japan	1.34	2.12	-0.78	17.09	0.01	0.24	0.00
Canada	1.30	1.73	-0.43	12.82	0.03	1.15	0.01
India	1.29	0.90	0.39	20.19	0.01	0.43	0.01
Taiwan	1.09	0.94	0.14	25.34	0.01	0.31	0.02
Netherlands	0.99	0.55	0.44	25.28	0.05	1.83	0.05
France	0.97	1.17	-0.20	20.23	0.01	0.20	0.05
Switzerland	0.84	0.96	-0.12	17.72	0.02	0.86	0.02
Sweden	0.77	0.30	0.47	26.78	0.05	1.87	0.08
S. Korea	0.65	0.74	-0.09	24.40	-0.00	-0.19	0.04
Italy	0.59	0.36	0.23	20.40	0.02	0.69	0.04
Australia	0.53	0.74	-0.21	22.64	0.00	0.05	0.04
Hong Kong	0.51	0.27	0.24	22.74	0.00	0.16	-0.01
Denmark	0.48	0.28	0.20	22.75	0.02	0.92	0.04
Brazil	0.45	0.35	0.10	32.09	0.00	0.12	0.04
Euro. Monetary Union	0.43	0.00	0.43	26.76	0.03	1.08	0.05
Ireland	0.38	0.30	0.08	12.89	0.00	0.11	0.00
Spain	0.37	0.27	0.11	16.29	0.00	0.17	0.03
China	0.37	0.30	0.06	30.24	0.01	0.45	-0.01
Belgium	0.28	0.12	0.16	18.85	0.00	0.18	0.02
Mexico	0.26	0.18	0.09	20.71	0.00	0.04	0.02
Singapore	0.26	0.14	0.12	15.93	0.00	0.06	0.00
Luxembourg	0.19	0.25	-0.05	8.00	0.00	0.07	-0.03
Indonesia	0.19	0.11	0.08	22.00	0.00	0.05	0.01
N/A	0.18	0.00	0.18	17.37	0.01	0.20	0.03
South Africa	0.18	0.20	-0.02	29.21	-0.00	-0.03	0.05
Norway	0.13	0.06	0.06	24.98	0.01	0.21	0.05



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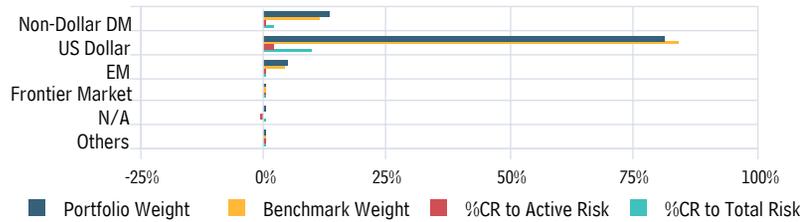
BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
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 ACCEPTED: 8,731

Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	6,833,337,742.74	84.15	76.27
Euro	431,758,387.39	6.30	7.28
British Pound Sterling	169,548,014.20	4.21	2.93
Hong Kong Dollar	149,580,618.33	-0.06	1.85
Japanese Yen	112,815,858.30	-0.02	1.24

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	106,183,378.11	0.44	1.19
New Taiwan Dollar	91,335,026.14	0.30	1.31
Korean Won	48,613,819.42	-0.28	0.81
Brazilian Real	37,599,255.34	0.11	0.57
Chinese Yuan	29,960,922.75	0.44	0.39

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)								
	Portfolio	Benchmark	Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)	
Total	100.00	100.00	0.00	13.01	13.01	100.00	2.46	100.00	
US Dollar	81.22	84.14	-2.92	12.35	9.93	76.27	2.07	84.15	
Euro	5.13	3.04	2.09	21.05	0.95	7.28	0.16	6.30	
British Pound Sterling	2.02	1.32	0.70	22.94	0.38	2.93	0.10	4.21	
Hong Kong Dollar	1.78	1.62	0.15	28.60	0.24	1.85	-0.00	-0.06	
Japanese Yen	1.34	2.01	-0.67	17.09	0.16	1.24	-0.00	-0.02	
Indian Rupee	1.26	0.88	0.38	20.61	0.16	1.19	0.01	0.44	
New Taiwan Dollar	1.09	0.94	0.15	25.34	0.17	1.31	0.01	0.30	
Swiss Franc	0.77	0.90	-0.13	18.19	0.12	0.89	0.02	0.72	
Canadian Dollar	0.71	1.05	-0.34	21.57	0.14	1.04	0.02	0.98	
Korean Won	0.58	0.74	-0.16	24.40	0.11	0.81	-0.01	-0.28	
Swedish Krona	0.54	0.29	0.25	27.73	0.12	0.95	0.03	1.28	
Danish Krone	0.48	0.27	0.20	22.76	0.08	0.64	0.02	0.91	
Australian Dollar	0.46	0.66	-0.20	25.71	0.10	0.75	0.00	0.02	
Brazilian Real	0.45	0.33	0.12	32.21	0.07	0.57	0.00	0.11	
Chinese Yuan	0.36	0.29	0.07	31.12	0.05	0.39	0.01	0.44	



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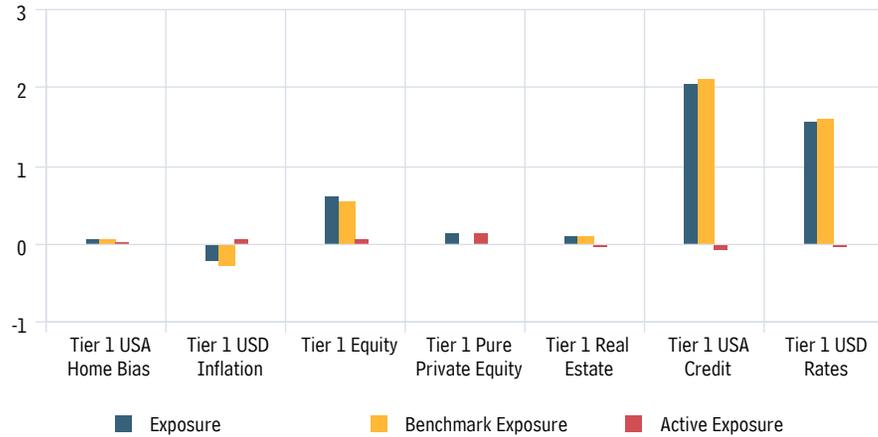
BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

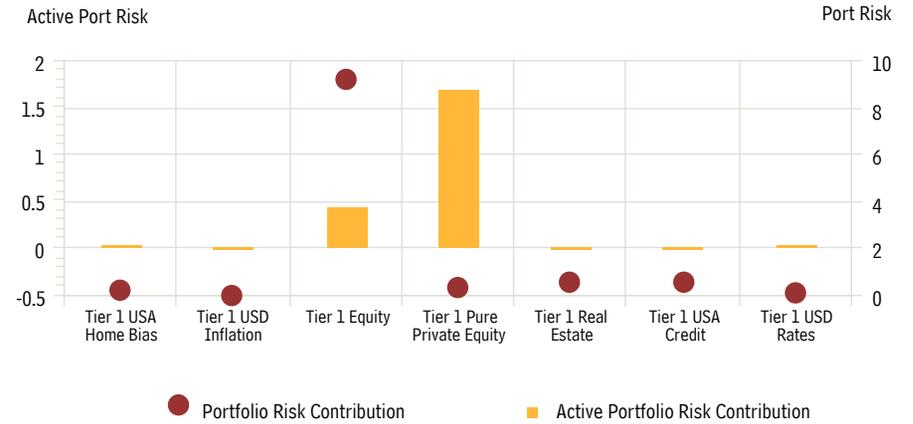
COMPANY: NYCRC - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825
 MODEL: MAC.L Tier 1 USA

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Macro Factor Exposures



Macro Factor Risk Contribution



BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

COMPANY: NYCRS - BERS
PORTFOLIO: BERS_Plan3
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Risk Source	Risk Decomposition						
	Exposure			Contribution			
	Exposure	Benchmark Exposure	Active Exposure	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Total Risk	-	-	-	13.01	100.00	2.46	100.00
Local Market Risk	-	-	-	12.44	95.57	2.39	97.09
Common Factor Risk	-	-	-	12.40	95.25	2.32	94.13
Country	-	-	-	0.20	1.57	0.00	0.17
Tier 1 USA Home Bias	0.06	0.06	0.00	0.20	1.57	0.00	0.17
Factor Residual Risk	-	-	-	1.30	10.01	0.25	10.11
Inflation	-	-	-	0.05	0.41	-0.01	-0.45
Tier 1 USD Inflation	-0.20	-0.29	0.08	0.05	0.41	-0.01	-0.45
Interaction within Common Factor	-	-	-	N/A	-	N/A	-
Market	-	-	-	9.23	70.93	0.43	17.50
Tier 1 Equity	0.62	0.56	0.06	9.23	70.93	0.43	17.50
Private Equity	-	-	-	0.32	2.44	1.68	68.21
Tier 1 Pure Private Equity	0.14	0.00	0.14	0.32	2.44	1.68	68.21
Private Real Estate	-	-	-	0.57	4.37	-0.03	-1.08
Tier 1 Real Estate	0.09	0.10	-0.01	0.57	4.37	-0.03	-1.08
Spread	-	-	-	0.57	4.37	-0.01	-0.38
Tier 1 USA Credit	2.07	2.13	-0.06	0.57	4.37	-0.01	-0.38
Term Structure	-	-	-	0.15	1.16	0.00	0.05
Tier 1 USD Rates	1.57	1.61	-0.04	0.15	1.16	0.00	0.05
Specific Risk	-	-	-	0.04	0.32	0.07	2.96
Currency Risk	-	-	-	0.58	4.43	0.07	2.91
Currency/Market Interaction	-	-	-	N/A	-	N/A	-

Tier 1 Macro Factor Scheme has six factors		
Tier 1 Factor	Exposure Type	Description
Equity	Membership (weights)	USA Equity
Pure Private Equity	Membership (weights)	USA Private Equity
Real Estate	Membership (weights)	USA Real Estate
USA Credit	Sensitivities (durations)	Sensitive to USA credit spreads
USD Inflation	Sensitivities (durations)	Sensitive to USD inflation protected assets
USD Rates	Sensitivities (durations)	Sensitive to Govt rate exposure
Commodities	Membership (weights)	Sensitive to Commodities
USA Home Bias		USA Home Bias factor returns is very similar to that of a portfolio long the MSCI USA IMI index and short the currency-hedged MSCI ACWI ex-US IMI index.

Factor Residual Risk				
Risk Source	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Basis	-0.00	-0.00	-0.00	-0.00
Country	0.00	0.00	0.00	0.03
Implied Volatility	0.02	0.15	0.00	0.01
Industry	0.11	0.82	0.07	2.76
Inflation	0.01	0.08	-0.01	-0.36
Interaction within Factor Residual Risk	N/A	-	N/A	-
Market	0.61	4.70	0.03	1.31
Private Equity	-0.01	-0.07	-0.05	-1.94
Private Real Estate	0.22	1.68	-0.01	-0.60
Spread	0.09	0.70	0.01	0.38
Style	0.27	2.09	0.20	8.28
Term Structure	-0.02	-0.12	0.01	0.23

BarraOne Total Plan Summary

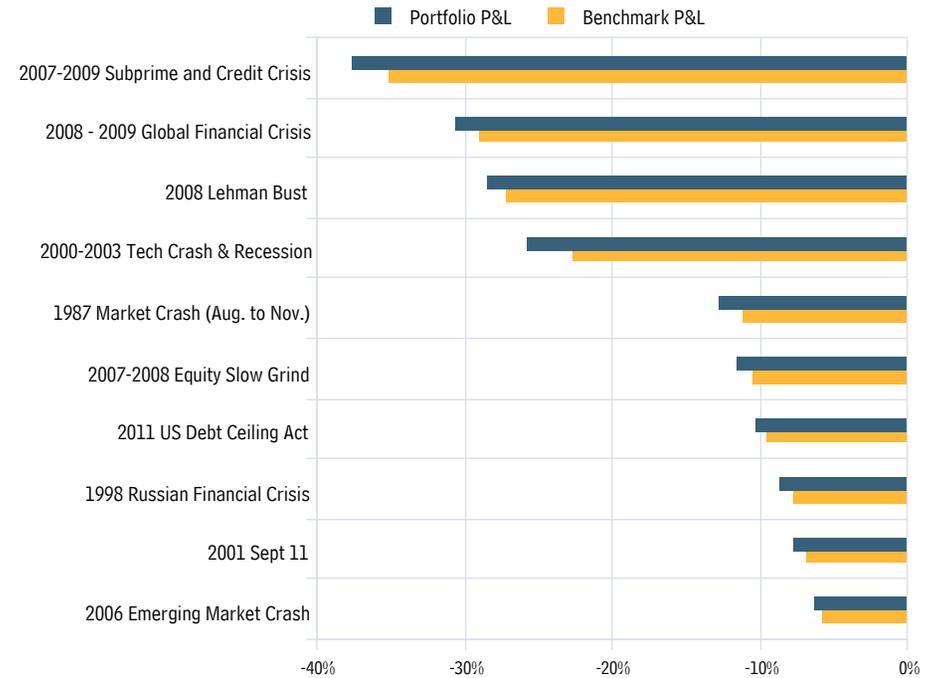
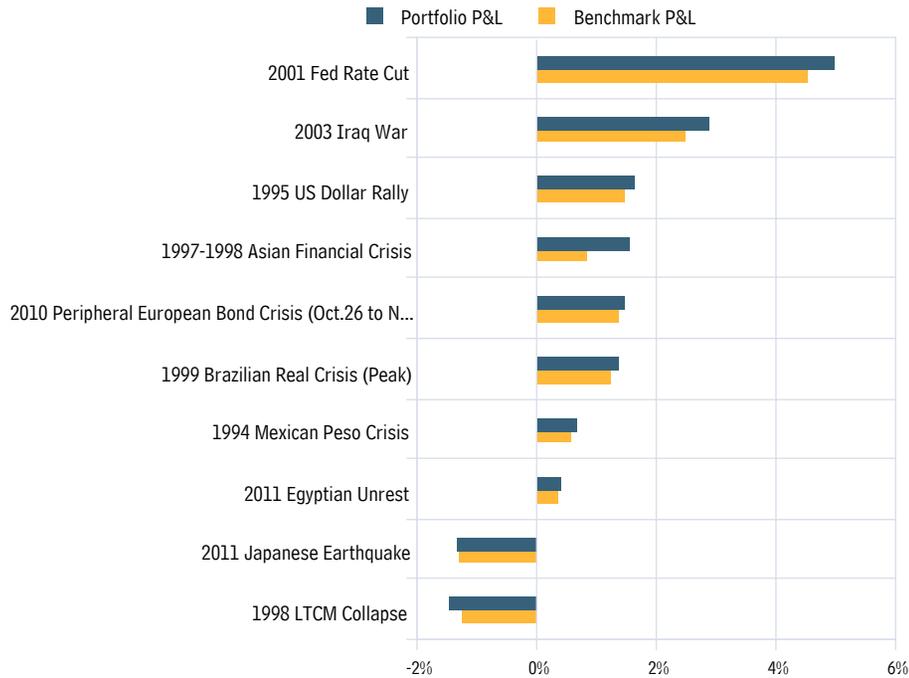
COMPANY: NYCRS - BERS
 PORTFOLIO: BERS_Plan3
 BENCHMARK: BERS_Policy3
 POSITIONS: 8,825
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 8,413,662,415
 ACCEPTED: 8,731

Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2001 Fed Rate Cut	4.96	4.55	417,000,403
2003 Iraq War	2.88	2.51	242,467,148
1995 US Dollar Rally	1.64	1.47	138,244,815
1997-1998 Asian Financial Crisis	1.57	0.86	131,680,218
2010 Peripheral European Bond Crisis (Oc	1.46	1.38	122,419,196
1999 Brazilian Real Crisis (Peak)	1.37	1.27	115,321,110
1994 Mexican Peso Crisis	0.65	0.56	54,828,059
2011 Egyptian Unrest	0.39	0.34	32,882,686
2011 Japanese Earthquake	-1.31	-1.30	-110,632,989
1998 LTCM Collapse	-1.46	-1.26	-122,959,653

Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-37.60	-35.20	-3,163,455,645
2008 - 2009 Global Financial Crisis	-30.69	-29.06	-2,582,283,317
2008 Lehman Bust	-28.44	-27.18	-2,392,808,647
2000-2003 Tech Crash & Recession	-25.75	-22.77	-2,166,801,071
1987 Market Crash (Aug. to Nov.)	-12.77	-11.22	-1,074,178,767
2007-2008 Equity Slow Grind	-11.52	-10.45	-968,962,341
2011 US Debt Ceiling Act	-10.30	-9.64	-866,684,020
1998 Russian Financial Crisis	-8.58	-7.73	-722,267,852
2001 Sept 11	-7.72	-6.90	-649,552,257
2006 Emerging Market Crash	-6.34	-5.75	-533,837,471



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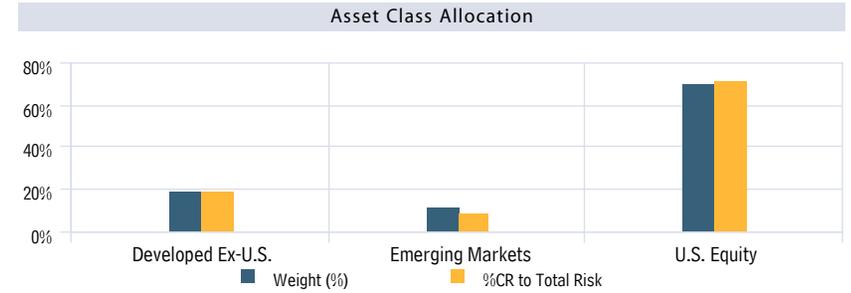
BarraOne Equity Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 4,713
 MODEL: MACL

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 3,877,504,444
 ACCEPTED: 4,666

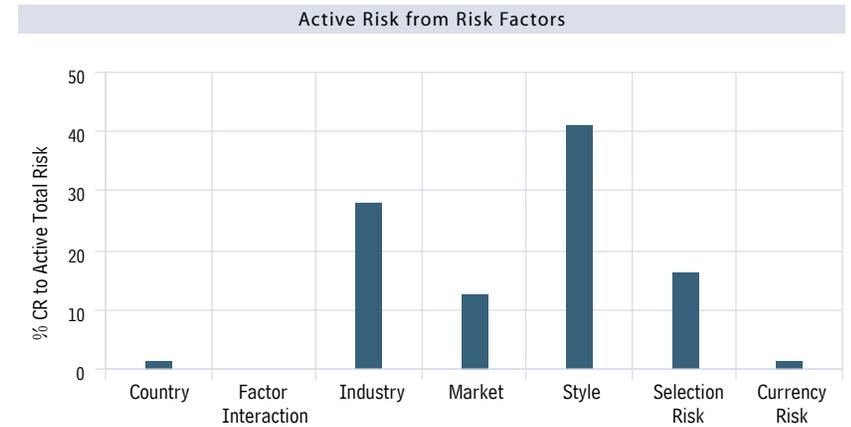
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	18.02	Total	3,877,504,444	100.00	18.02	18.02	100.00
Benchmark Risk	17.48	Developed Ex-U.S.	736,034,129	18.98	19.48	3.44	19.12
Active Risk	1.14	Emerging Markets	443,869,064	11.45	17.95	1.70	9.43
Portfolio Beta	1.03	U.S. Equity	2,697,601,250	69.57	18.78	12.87	71.45



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	18.02	100.00	1.00	1.14	100.00	1.00
Local Market Risk	17.20	95.44	1.00	1.13	98.63	0.97
Common Factor Risk	17.07	94.75	0.99	0.94	82.33	0.88
Country	0.00	0.01	0.01	0.01	1.22	0.18
Industry	0.20	1.10	0.19	0.32	27.76	0.63
Market	16.43	91.19	0.99	0.14	12.51	0.36
Style	0.44	2.46	0.72	0.47	40.84	0.69
Selection Risk	0.12	0.69	0.08	0.19	16.31	0.40
Currency Risk	0.82	4.56	0.55	0.02	1.37	0.06



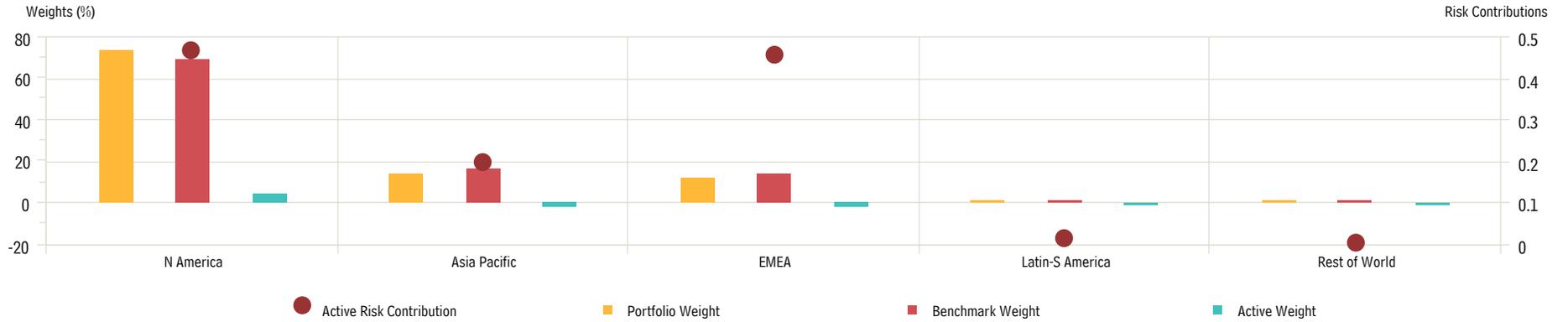
BarraOne Equity Summary

COMPANY: NYCRC - BERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 4,713
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 3,877,504,444
 ACCEPTED: 4,666

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	18.02	1.14	100.00	0.01
Asia Pacific	14.50	16.12	-1.61	17.50	0.20	17.25	-0.02
EMEA	11.71	13.78	-2.07	21.86	0.46	39.88	-0.01
Latin-S America	0.89	1.14	-0.26	25.30	0.02	1.36	-0.03
N America	72.61	68.57	4.04	18.77	0.47	41.04	0.01
Rest of World	0.29	0.39	-0.10	15.95	0.01	0.46	-0.06



BarraOne Equity Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 4,713
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 3,877,504,444
 ACCEPTED: 4,666

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	18.02	1.14	100.00	0.01
United States	69.68	65.96	3.73	18.83	0.36	31.44	0.09
China International	3.56	3.16	0.40	27.26	-0.03	-2.61	0.07
Japan	2.51	4.27	-1.76	18.32	0.12	10.70	0.03
Taiwan	2.36	1.99	0.36	25.34	0.02	1.73	0.08
India	2.26	1.87	0.40	20.90	0.01	0.75	0.05
United Kingdom	2.06	2.80	-0.75	23.17	0.12	10.13	0.06
Germany	1.84	1.64	0.20	26.13	0.07	5.76	0.09
Netherlands	1.48	0.88	0.60	30.70	0.06	5.23	0.12
S. Korea	1.36	1.57	-0.21	24.80	0.00	0.37	0.05
Switzerland	1.26	1.92	-0.65	18.62	0.06	5.09	0.05
France	1.23	2.37	-1.13	22.17	0.04	3.16	0.07
Hong Kong	1.03	0.47	0.56	24.03	-0.00	-0.42	0.05
Sweden	0.98	0.61	0.37	29.28	0.03	2.87	0.11
Canada	0.89	2.26	-1.36	23.25	0.09	7.61	0.05
Italy	0.85	0.51	0.35	23.53	0.02	2.14	0.09
Brazil	0.83	0.70	0.12	31.35	-0.00	-0.30	0.04
Australia	0.80	1.40	-0.60	27.89	0.05	4.32	0.07
Denmark	0.75	0.58	0.16	23.27	0.02	1.75	0.07
Singapore	0.51	0.23	0.28	16.58	-0.01	-0.72	0.05
China	0.45	0.62	-0.17	43.95	0.04	3.83	0.05
Mexico	0.42	0.36	0.06	24.55	0.00	0.05	0.05
Indonesia	0.40	0.24	0.16	22.39	-0.01	-0.49	0.04
South Africa	0.37	0.41	-0.04	29.81	0.00	0.23	0.06
Belgium	0.37	0.18	0.19	23.45	-0.00	-0.36	0.05
Ireland	0.27	0.19	0.09	28.13	0.00	0.20	0.09
Thailand	0.27	0.26	0.01	24.19	-0.00	-0.09	0.04
Norway	0.18	0.13	0.05	28.34	0.00	0.39	0.05
Spain	0.17	0.50	-0.33	23.34	0.02	1.45	0.05
United Arab Emirates	0.17	0.17	0.00	22.51	-0.00	-0.01	0.03
Hungary	0.12	0.03	0.09	41.37	0.00	0.29	0.11

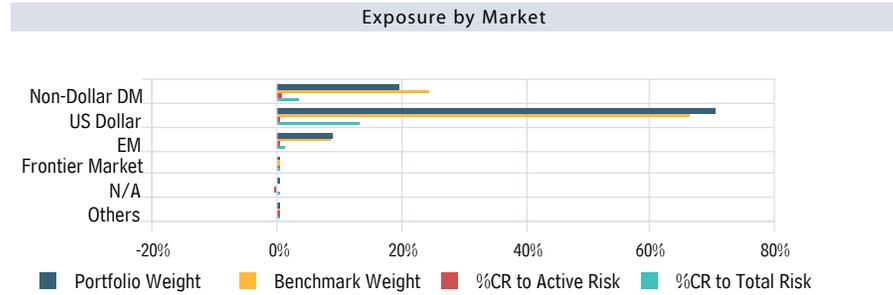


BarraOne Equity Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 4,713
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 3,877,504,444
 ACCEPTED: 4,666

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	2,738,832,636.86	33.86	72.67	New Taiwan Dollar	91,335,026.14	1.73	2.09
Euro	244,975,073.14	18.08	7.28	Indian Rupee	87,679,717.18	0.75	1.57
Hong Kong Dollar	148,321,973.00	-0.30	2.99	Korean Won	46,777,001.57	0.65	1.25
Japanese Yen	97,500,730.04	10.70	1.82	Brazilian Real	32,088,169.97	-0.30	0.77
British Pound Sterling	81,261,071.16	10.64	2.28	CNH	17,764,503.58	-2.85	0.05

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	18.02	18.02	100.00	1.14	100.00
US Dollar	70.63	66.25	4.39	18.81	13.09	72.67	0.39	33.86
Euro	6.32	6.48	-0.16	23.38	1.31	7.28	0.21	18.08
Hong Kong Dollar	3.83	3.46	0.37	28.70	0.54	2.99	-0.00	-0.30
Japanese Yen	2.51	4.27	-1.76	18.32	0.33	1.82	0.12	10.70
New Taiwan Dollar	2.36	1.99	0.36	25.34	0.38	2.09	0.02	1.73
Indian Rupee	2.26	1.87	0.40	20.90	0.28	1.57	0.01	0.75
British Pound Sterling	2.10	2.81	-0.71	23.57	0.41	2.28	0.12	10.64
Swiss Franc	1.27	1.92	-0.65	18.60	0.20	1.09	0.06	5.08
Korean Won	1.21	1.57	-0.37	24.71	0.22	1.25	0.01	0.65
Canadian Dollar	0.89	2.23	-1.34	23.21	0.17	0.97	0.09	7.51
Brazilian Real	0.83	0.70	0.12	31.35	0.14	0.77	-0.00	-0.30
Australian Dollar	0.80	1.40	-0.60	27.89	0.18	1.01	0.05	4.32
Danish Krone	0.75	0.58	0.16	23.27	0.13	0.72	0.02	1.75
Swedish Krona	0.53	0.61	-0.08	29.11	0.13	0.70	0.01	0.72
Singapore Dollar	0.51	0.23	0.28	16.58	0.06	0.32	-0.01	-0.72



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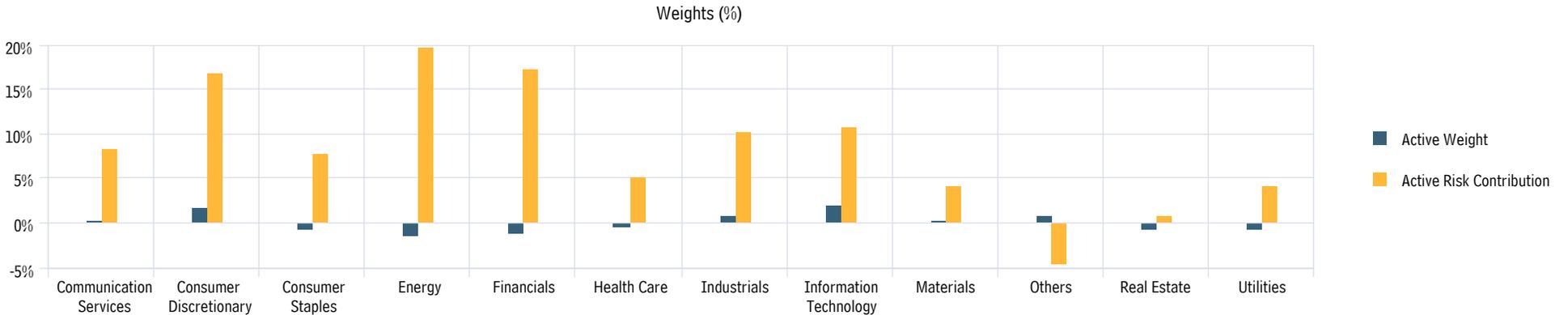
BarraOne Equity Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 4,713
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 3,877,504,444
 ACCEPTED: 4,666

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	18.02	1.14	100.00	0.01
Communication Services	7.59	7.24	0.35	22.50	0.09	8.30	0.11
Consumer Discretionary	13.04	11.34	1.70	23.64	0.19	16.78	0.13
Consumer Staples	6.12	6.88	-0.77	12.56	0.09	7.71	0.02
Energy	3.01	4.55	-1.53	27.91	0.23	19.71	0.00
Financials	14.41	15.64	-1.23	19.89	0.20	17.15	0.08
Health Care	11.54	11.92	-0.38	14.83	0.06	5.10	0.04
Industrials	11.43	10.75	0.68	19.63	0.12	10.23	0.08
Information Technology	23.69	21.83	1.86	23.01	0.12	10.78	0.12
Materials	4.67	4.52	0.15	20.47	0.05	4.05	0.07
Others	0.67	0.00	0.67	1.34	-0.05	-4.50	0.00
Real Estate	1.80	2.60	-0.80	21.12	0.01	0.64	0.06
Utilities	2.03	2.72	-0.70	17.09	0.05	4.05	0.01



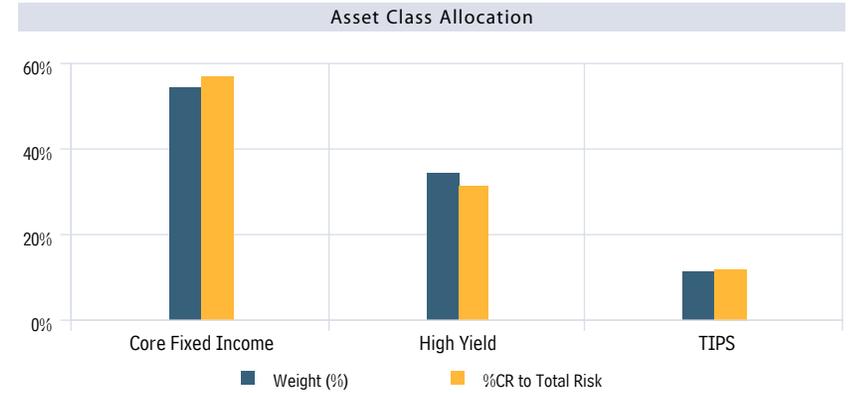
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

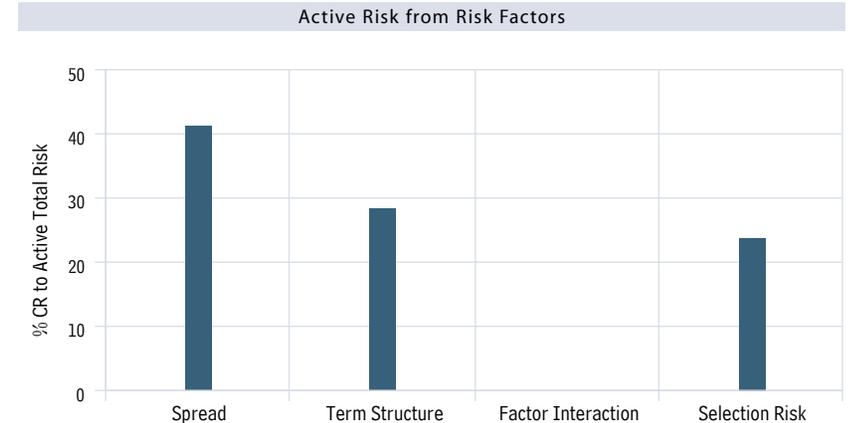
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	5.17	Total	2,217,094,827	100.00	5.17	5.17	100.00
Benchmark Risk	5.22	Core Fixed Income	1,204,782,395	54.34	5.88	2.95	56.96
Active Risk	0.18	High Yield	757,134,518	34.15	6.00	1.61	31.04
Portfolio Beta	0.99	TIPS	255,177,914	11.51	6.41	0.62	11.99
Cont. to Eff. Duration	5.28						
Convexity	0.46						
Yield to Worst (%)	5.38						
OAS to Swap (bp)	134.48						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	5.17	100.00	1.00	0.18	100.00	1.00
Local Market Risk	5.17	99.99	1.00	0.18	99.92	1.00
Common Factor Risk	5.17	99.95	1.00	0.14	76.06	0.87
Implied Volatility	0.09	1.64	0.55	0.00	1.38	0.18
Inflation	0.02	0.44	0.04	0.00	1.92	0.26
Spread	0.82	15.76	0.31	0.08	41.23	0.74
Term Structure	4.25	82.08	0.82	0.05	28.33	0.64
Selection Risk	0.00	0.05	0.02	0.04	23.87	0.49



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BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

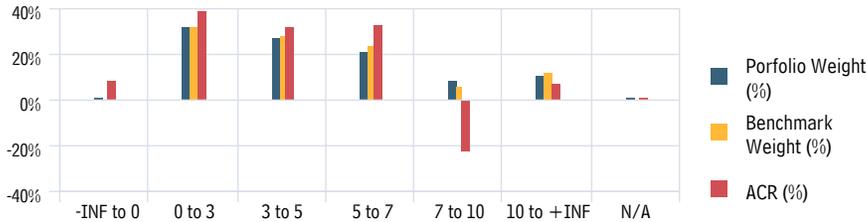
CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

Portfolio by Factor Breakdowns

Spread Factor	Volatility	Top 10 Spread Factor				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
US Consumer Discretionary HY S	51.36	1.33	1.25	0.08	0.27	0.52	0.19	0.02	12.07	
US Health Care HY Spread	45.72	0.36	0.29	0.07	0.22	0.49	0.05	0.01	8.10	
US ABS Miscellaneous Spread	31.20	0.07	0.00	0.07	0.17	0.56	0.00	0.01	6.93	
US Bank Loan Consumer Discreti	24.57	0.09	0.00	0.09	0.13	0.51	0.01	0.01	6.06	
US Energy HY Spread	47.63	0.43	0.40	0.04	0.26	0.55	0.04	0.01	5.31	
US Health Care - Pharmaceutica	54.21	0.12	0.07	0.05	0.19	0.36	0.03	0.01	5.11	
EU Consumer Discretionary Spre	51.83	0.08	0.03	0.05	0.19	0.36	0.01	0.01	4.95	
US Agency Spread	42.60	0.04	0.00	0.04	0.23	0.53	0.00	0.01	4.65	
US Health Care - Equipment & S	41.60	0.15	0.10	0.05	0.16	0.39	0.02	0.01	4.56	
US Corporate HY Spread	44.30	0.03	0.00	0.03	0.24	0.54	0.00	0.01	4.03	

Term Structure	Volatility	Top 10 Term Structure				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
USD Rate 20Y	0.89	1.12	1.31	-0.19	-0.00	-0.53	0.78	0.09	47.36	
USD Rate 2Y	1.27	0.59	0.65	-0.05	-0.01	-0.55	0.50	0.04	19.85	
USD Rate 50Y	0.85	0.00	0.02	-0.02	-0.00	-0.46	0.00	0.01	4.16	
USD Rate 1Y	1.22	0.10	0.11	-0.01	-0.01	-0.51	0.07	0.01	3.01	
USD Muni Rates 1Y	1.13	0.00	0.00	0.00	-0.00	-0.13	0.00	-0.00	-0.01	
USD Muni Rates 2Y	1.18	0.00	0.00	0.00	-0.00	-0.14	0.00	-0.00	-0.02	
USD Muni Rates 5Y	1.12	0.00	0.00	0.00	-0.00	-0.09	0.00	-0.00	-0.05	
USD Muni Rates 10Y	1.06	0.00	0.00	0.00	-0.00	-0.12	0.00	-0.00	-0.20	
USD Muni Rates 20Y	1.04	0.00	0.00	0.00	-0.00	-0.10	0.00	-0.00	-0.24	
USD Rate 6M	1.04	0.01	0.00	0.00	-0.00	-0.43	0.00	-0.00	-0.99	

%CR to Active Risk by Duration Buckets



Key Rate Duration



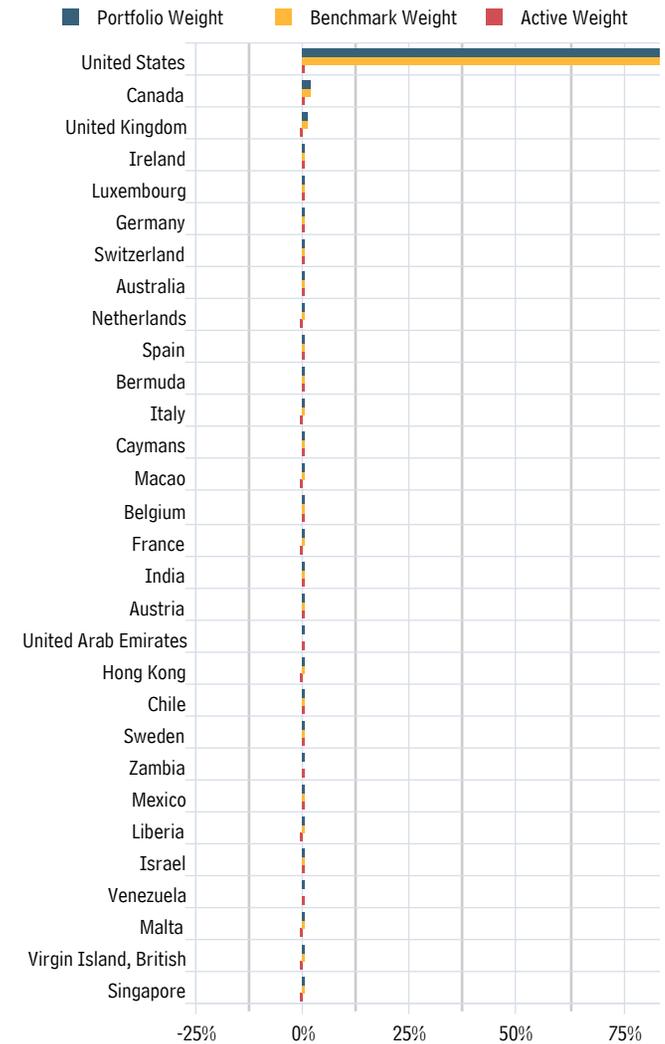
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	5.17	0.18	100.00	0.00
United States	92.31	92.09	0.22	5.25	0.16	87.24	-0.01
Canada	1.89	1.88	0.01	5.65	0.00	0.05	-0.00
United Kingdom	1.34	1.48	-0.15	4.52	0.01	3.44	-0.01
Ireland	0.62	0.60	0.02	6.06	0.00	1.64	0.00
Luxembourg	0.58	0.49	0.09	9.19	0.00	1.56	0.01
Germany	0.38	0.14	0.23	6.23	0.00	1.64	-0.00
Switzerland	0.26	0.17	0.09	6.11	0.00	0.87	-0.01
Australia	0.26	0.25	0.01	6.86	0.00	1.17	-0.00
Netherlands	0.25	0.31	-0.07	9.62	-0.00	-0.25	0.01
Spain	0.24	0.11	0.13	4.30	0.00	0.87	-0.01
Bermuda	0.18	0.16	0.02	2.94	-0.00	-0.83	0.01
Italy	0.17	0.33	-0.16	8.73	-0.00	-1.67	0.00
Caymans	0.16	0.11	0.05	6.25	0.00	0.74	0.02
Macao	0.16	0.31	-0.15	9.95	-0.00	-0.51	0.01
Belgium	0.15	0.13	0.01	13.04	-0.00	-0.59	-0.04
France	0.11	0.16	-0.05	13.51	0.00	0.81	0.01
India	0.11	0.08	0.03	7.43	0.00	0.19	0.00
Austria	0.11	0.02	0.09	10.32	0.00	1.34	0.02
United Arab Emirates	0.11	0.00	0.11	6.38	0.00	1.62	0.01
Hong Kong	0.09	0.15	-0.06	13.59	-0.00	-0.27	-0.01
Chile	0.07	0.01	0.07	1.18	0.00	0.34	-0.00
Sweden	0.07	0.01	0.06	1.62	0.00	0.29	-0.00
Zambia	0.06	0.00	0.06	1.96	0.00	0.51	0.00
Mexico	0.06	0.04	0.02	4.46	0.00	0.55	-0.02
Liberia	0.06	0.07	-0.01	3.90	-0.00	-0.03	-0.00
Israel	0.06	0.01	0.05	5.50	0.00	0.33	0.00
Venezuela	0.06	0.00	0.06	0.18	0.00	0.42	0.00
Malta	0.02	0.04	-0.02	31.91	-0.00	-1.22	0.09
Virgin Island, British	0.02	0.02	-0.00	5.22	-0.00	-0.01	-0.00
Singapore	0.02	0.10	-0.08	17.59	-0.00	-0.33	-0.01



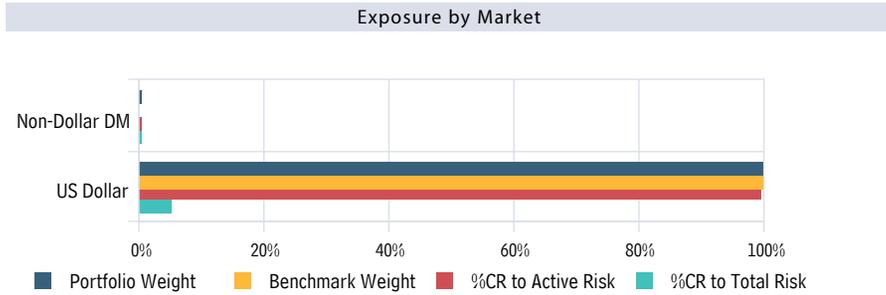
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BarraOne Fixed Income Summary

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 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	2,216,836,158.50	99.77	99.99
Canadian Dollar	201,307.36	0.13	0.00
British Pound Sterling	50,896.29	0.10	0.00
Euro	6,464.92	0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.17	5.17	100.00	0.18	100.00
US Dollar	99.99	100.00	-0.01	5.17	5.17	99.99	0.18	99.77
Canadian Dollar	0.01	0.00	0.01	6.71	0.00	0.00	0.00	0.13
British Pound Sterling	0.00	0.00	0.00	53.56	0.00	0.00	0.00	0.10
Euro	0.00	0.00	0.00	7.34	0.00	0.00	0.00	0.00



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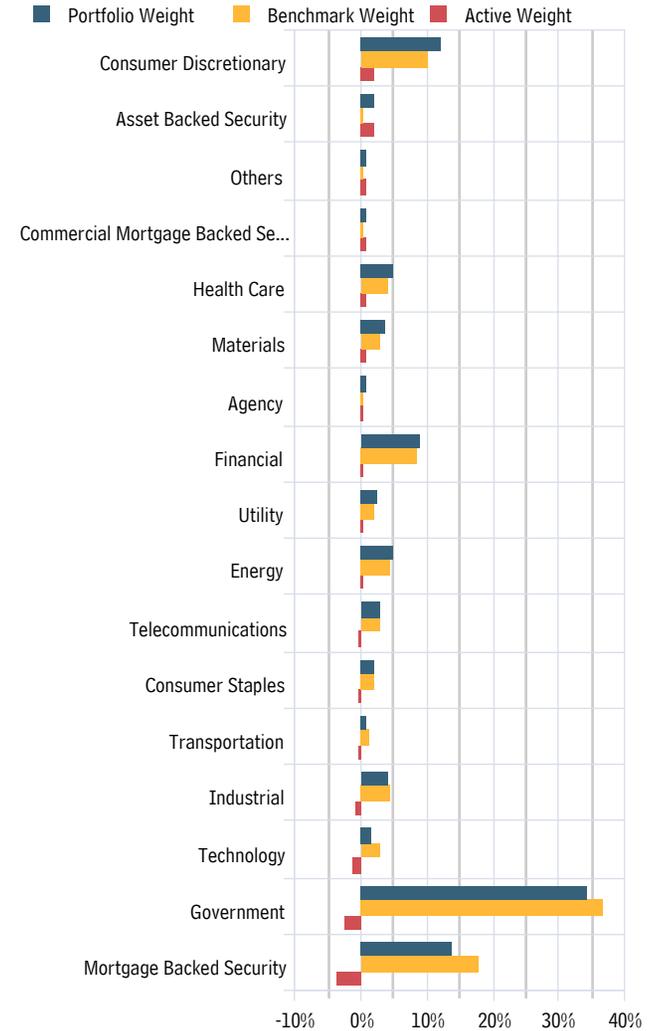
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.28	5.17	0.18	100.00	0.00
Government	34.23	36.64	-2.41	2.12	5.39	0.01	4.47	-0.03
Mortgage Backed Security	13.81	17.56	-3.75	0.84	6.65	0.07	39.67	-0.03
Consumer Discretionary	12.01	9.89	2.12	0.48	6.84	0.04	22.05	0.01
Financial	8.79	8.49	0.30	0.42	5.59	-0.01	-7.41	-0.00
Health Care	4.71	3.98	0.73	0.29	7.51	0.01	5.06	-0.01
Energy	4.66	4.50	0.17	0.16	5.36	0.03	16.72	0.01
Industrial	3.99	4.63	-0.64	0.14	6.02	-0.00	-0.69	0.01
Materials	3.51	2.84	0.68	0.12	5.26	0.02	10.23	0.01
Telecommunications	2.63	2.65	-0.03	0.15	7.78	-0.01	-2.89	0.00
Utility	2.39	2.15	0.24	0.13	5.80	0.01	6.76	-0.02
Asset Backed Security	2.04	0.00	2.04	0.09	4.51	-0.00	-0.54	-0.01
Consumer Staples	1.93	2.18	-0.24	0.11	6.42	0.00	0.35	-0.01
Technology	1.81	2.84	-1.03	0.08	6.04	0.00	0.04	-0.00
Transportation	1.01	1.30	-0.30	0.04	4.77	-0.00	-0.75	0.00
Others	0.89	0.00	0.89	0.02	2.07	0.01	7.41	0.00
Commercial Mortgage Backed	0.74	0.00	0.74	0.01	2.42	0.01	3.80	-0.00
Agency	0.69	0.28	0.40	0.05	6.94	-0.01	-3.90	-0.02
Local/Provincial	0.17	0.07	0.10	0.01	6.58	-0.00	-0.39	-0.01



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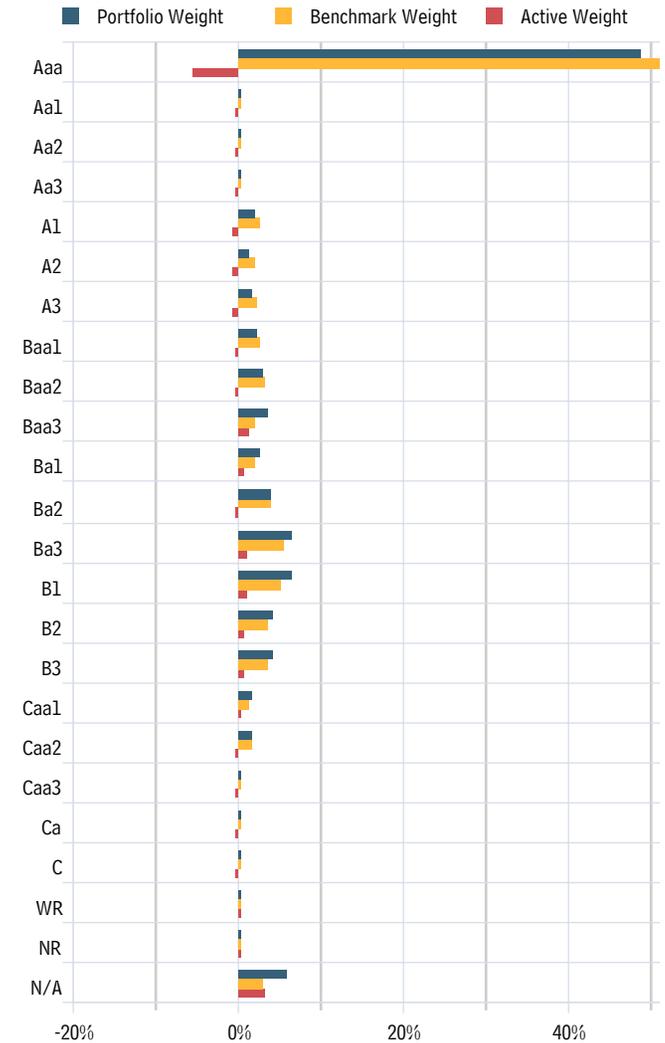
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 3,845
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,217,094,827
 ACCEPTED: 3,800

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.28	5.51	5.17	0.18	100.00
Aaa	48.70	54.13	-5.43	2.95	6.28	5.61	0.10	53.72
Aa1	0.01	0.02	-0.00	0.00	2.55	3.02	0.00	0.33
Aa2	0.28	0.43	-0.15	0.03	10.72	9.32	0.00	1.81
Aa3	0.17	0.44	-0.27	0.02	10.52	9.82	0.00	2.34
A1	2.04	2.56	-0.51	0.17	8.53	8.25	0.00	2.17
A2	1.17	1.97	-0.80	0.08	6.68	6.74	0.02	8.77
A3	1.67	2.40	-0.73	0.13	8.27	7.74	0.01	3.73
Baa1	2.36	2.56	-0.21	0.16	7.10	7.04	0.01	4.44
Baa2	2.89	3.15	-0.26	0.20	7.29	7.12	0.00	0.10
Baa3	3.46	2.09	1.37	0.16	4.64	5.01	-0.01	-2.82
Ba1	2.65	2.09	0.55	0.11	4.29	5.01	0.01	4.53
Ba2	3.96	4.00	-0.04	0.15	4.11	5.51	0.00	2.55
Ba3	6.31	5.39	0.92	0.22	3.86	5.14	0.02	12.62
B1	6.42	5.30	1.12	0.23	3.85	5.84	0.02	10.76
B2	4.29	3.66	0.63	0.14	3.38	5.73	0.02	8.32
B3	4.18	3.52	0.66	0.13	3.17	6.98	0.02	8.96
Caa1	1.64	1.38	0.26	0.05	3.04	9.29	-0.00	-2.03
Caa2	1.48	1.58	-0.10	0.05	3.54	11.82	-0.01	-4.93
Caa3	0.17	0.23	-0.06	0.01	3.15	19.46	-0.01	-4.38
Ca	0.09	0.24	-0.15	0.00	3.33	22.93	-0.01	-6.76
C	0.01	0.02	-0.01	0.00	2.64	34.63	-0.00	-0.70
WR	0.21	0.11	0.11	0.00	1.98	7.61	0.01	2.97
NR	0.01	0.00	0.01	0.00	3.76	4.92	0.00	0.03
Not Rated	5.84	2.74	3.10	0.30	5.27	4.78	-0.01	-6.55



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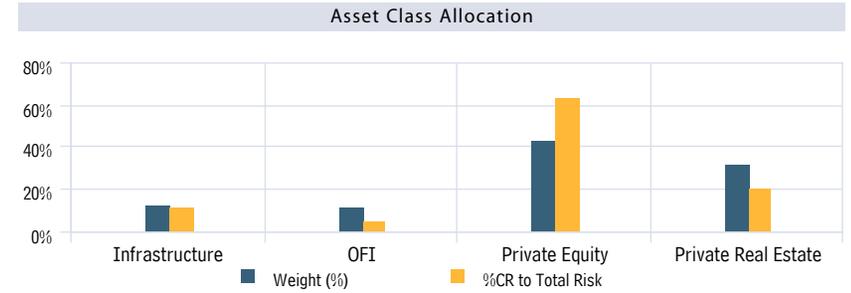
BarraOne Equity Summary

COMPANY: NYCRC - BERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 260
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,271,546,187
 ACCEPTED: 260

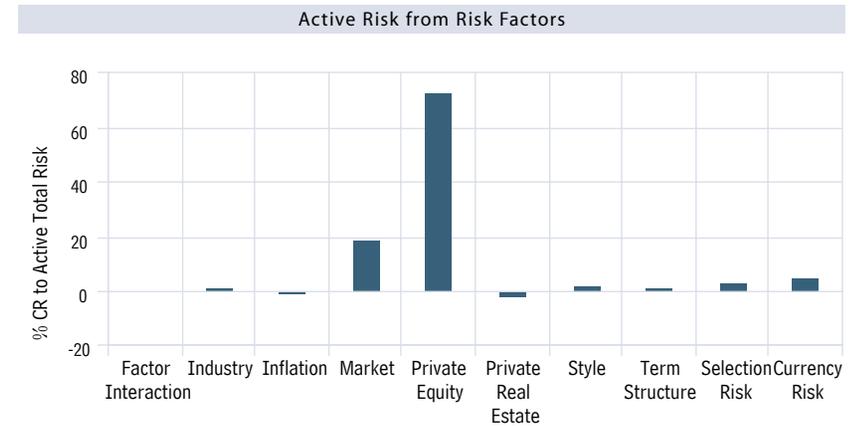
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	16.59	Total	2,271,546,187	100.00	16.59	16.59	100.00
Benchmark Risk	11.57	Infrastructure	299,547,232	13.19	15.69	1.90	11.43
Active Risk	8.69	OFI	262,523,099	11.56	10.13	0.91	5.46
Portfolio Beta	1.25	Private Equity	982,660,051	43.26	24.87	10.46	63.07
		Private Real Estate	726,815,805	32.00	13.71	3.33	20.05



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	16.59	100.00	1.00	8.69	100.00	1.00
Local Market Risk	16.01	96.50	1.00	8.31	95.53	0.99
Common Factor Risk	15.96	96.20	1.00	8.09	93.01	0.98
Private Real Estate	2.97	17.93	0.72	-0.14	-1.57	-0.10
Industry	0.12	0.73	0.14	0.11	1.28	0.14
Inflation	0.00	0.00	0.00	-0.06	-0.74	-0.16
Market	8.70	52.47	0.86	1.62	18.59	0.44
Private Equity	3.32	20.03	0.45	6.34	72.93	0.85
Spread	0.54	3.26	0.63	0.00	0.00	0.00
Style	0.27	1.63	0.35	0.21	2.41	0.26
Term Structure	0.02	0.14	0.03	0.01	0.15	0.05
Selection Risk	0.05	0.31	0.06	0.22	2.52	0.16
Currency Risk	0.58	3.50	0.46	0.39	4.47	0.31



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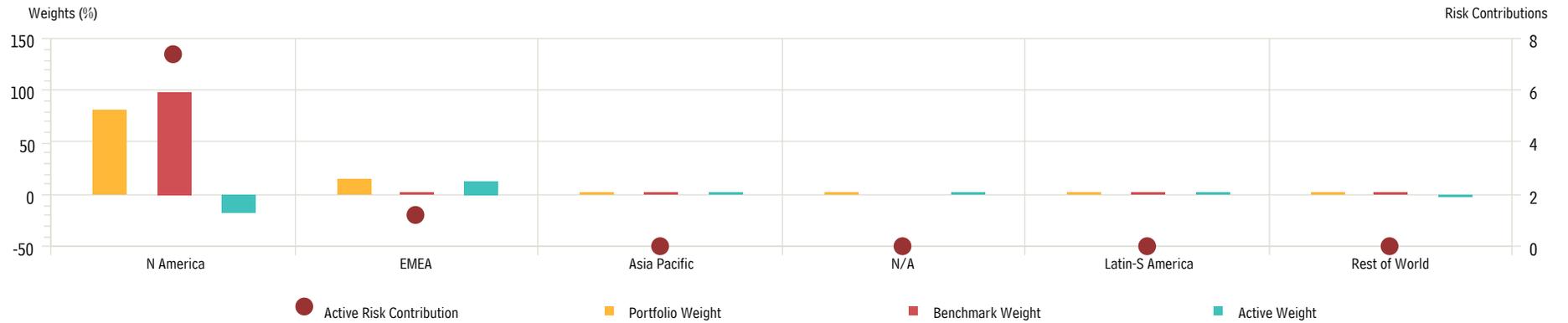
BarraOne Equity Summary

COMPANY: NYCRS - BERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 260
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,271,546,187
 ACCEPTED: 260

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.59	8.69	100.00	0.09
Asia Pacific	2.77	0.16	2.62	14.06	0.04	0.49	0.01
EMEA	15.19	1.57	13.62	20.39	1.18	13.53	0.07
Latin-S America	0.52	0.01	0.51	25.52	0.02	0.21	0.04
N America	80.70	98.08	-17.38	17.24	7.42	85.36	0.03
N/A	0.66	0.00	0.66	17.37	0.03	0.31	0.04
Rest of World	0.16	0.19	-0.03	18.45	0.01	0.09	-0.00



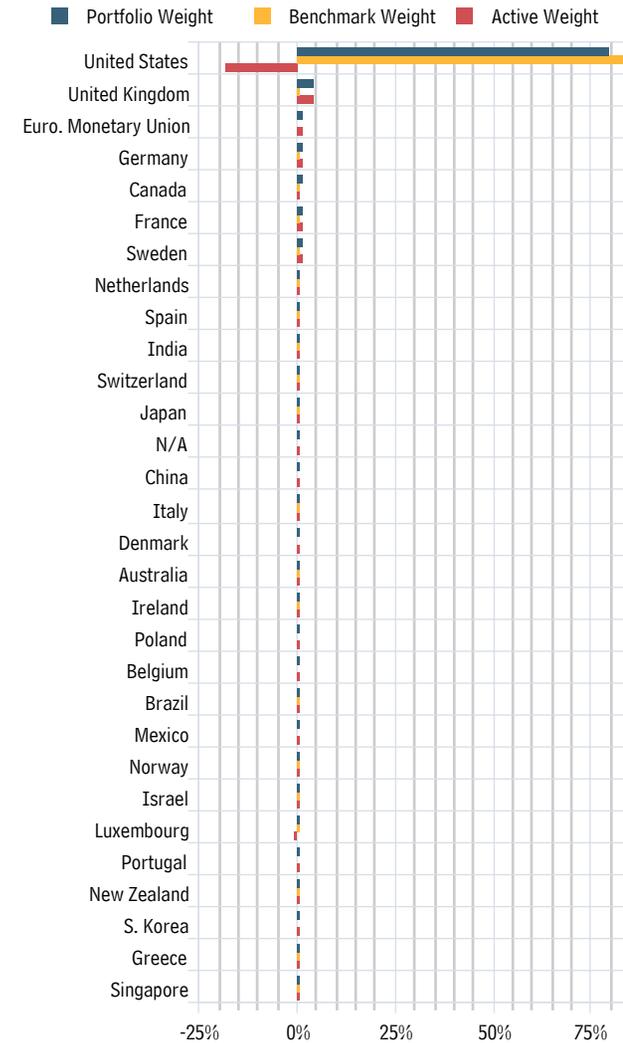
BarraOne Equity Summary

COMPANY: NYCRC - BERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 260
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,271,546,187
 ACCEPTED: 260

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.59	8.69	100.00	0.09
United States	79.23	97.40	-18.17	17.27	7.26	83.55	0.07
United Kingdom	4.15	0.36	3.78	23.20	0.37	4.24	0.11
Euro. Monetary Union	1.62	0.00	1.62	26.29	0.11	1.29	0.11
Germany	1.61	0.11	1.50	17.06	0.08	0.89	0.08
Canada	1.45	0.64	0.81	17.74	0.16	1.85	0.10
France	1.39	0.06	1.32	21.31	0.11	1.24	0.11
Sweden	1.10	0.02	1.09	29.58	0.13	1.47	0.15
Netherlands	0.89	0.17	0.72	20.14	0.06	0.69	0.09
Spain	0.85	0.01	0.84	19.58	0.05	0.60	0.10
India	0.82	0.02	0.80	21.66	0.02	0.23	0.06
Switzerland	0.71	0.04	0.67	24.94	0.06	0.74	0.12
Japan	0.67	0.01	0.66	13.13	-0.01	-0.06	0.03
N/A	0.66	0.00	0.66	17.37	0.03	0.31	0.08
China	0.59	0.00	0.59	16.99	0.00	0.04	0.04
Italy	0.58	0.14	0.44	21.91	0.04	0.50	0.10
Denmark	0.49	0.00	0.49	27.48	0.05	0.57	0.14
Australia	0.34	0.06	0.28	20.11	0.01	0.16	0.06
Ireland	0.33	0.17	0.16	12.24	0.01	0.06	0.04
Poland	0.31	0.00	0.31	28.75	0.03	0.32	0.13
Belgium	0.27	0.00	0.27	26.29	0.02	0.21	0.10
Brazil	0.25	0.01	0.24	43.63	0.01	0.16	0.10
Mexico	0.20	0.00	0.20	17.38	0.00	0.03	0.05
Norway	0.17	0.01	0.16	22.82	0.01	0.16	0.11
Israel	0.17	0.00	0.17	29.96	0.01	0.17	0.12
Luxembourg	0.15	0.44	-0.29	5.35	0.01	0.07	0.02
Portugal	0.12	0.00	0.12	14.27	0.00	0.01	0.05
New Zealand	0.11	0.01	0.10	22.83	0.00	0.04	0.06
S. Korea	0.08	0.00	0.08	19.24	0.00	0.02	0.06
Greece	0.08	0.00	0.08	37.45	0.01	0.11	0.16
Singapore	0.07	0.01	0.06	17.38	0.00	0.02	0.05



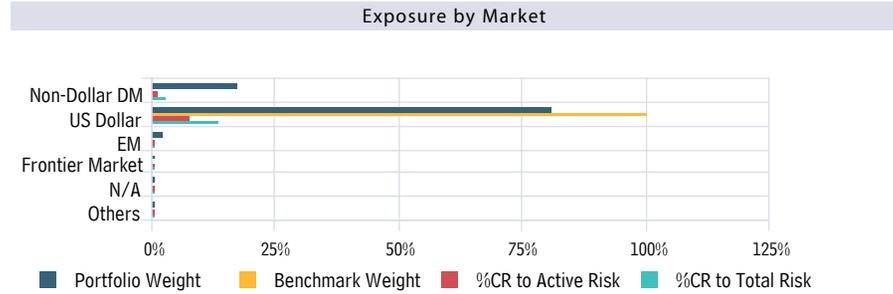
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BarraOne Equity Summary

COMPANY: NYCRC - BERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 260
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,271,546,187
 ACCEPTED: 260

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	1,830,151,989.91	83.78	81.70
Euro	186,776,849.32	6.13	7.45
British Pound Sterling	88,236,046.76	4.29	4.25
Canadian Dollar	25,189,718.15	1.76	1.37
Swedish Krona	25,003,955.31	1.46	1.43

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	18,503,660.93	0.23	0.52
Chinese Yuan	12,527,796.71	0.06	0.26
Polish Zloty	7,118,728.99	0.32	0.32
Brazilian Real	5,511,085.36	0.17	0.24
Mexican Peso	3,362,052.71	0.05	0.10

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	16.59	16.59	100.00	8.69	100.00
US Dollar	80.57	100.00	-19.43	17.02	13.55	81.70	7.28	83.78
Euro	8.22	0.00	8.22	19.22	1.23	7.45	0.53	6.13
British Pound Sterling	3.88	0.00	3.88	24.76	0.70	4.25	0.37	4.29
Canadian Dollar	1.11	0.00	1.11	22.68	0.23	1.37	0.15	1.76
Swedish Krona	1.10	0.00	1.10	29.58	0.24	1.43	0.13	1.46
Indian Rupee	0.81	0.00	0.81	21.73	0.09	0.52	0.02	0.23
Swiss Franc	0.70	0.00	0.70	21.79	0.10	0.59	0.05	0.56
Japanese Yen	0.67	0.00	0.67	13.13	0.03	0.21	-0.01	-0.07
Chinese Yuan	0.55	0.00	0.55	18.10	0.04	0.26	0.01	0.06
Danish Krone	0.49	0.00	0.49	27.55	0.09	0.53	0.05	0.57
Australian Dollar	0.34	0.00	0.34	20.11	0.05	0.29	0.01	0.13
Polish Zloty	0.31	0.00	0.31	28.75	0.05	0.32	0.03	0.32
Brazilian Real	0.24	0.00	0.24	44.55	0.04	0.24	0.01	0.17
New Israeli Sheqel	0.17	0.00	0.17	29.96	0.04	0.21	0.01	0.16
Mexican Peso	0.15	0.00	0.15	23.04	0.02	0.10	0.00	0.05



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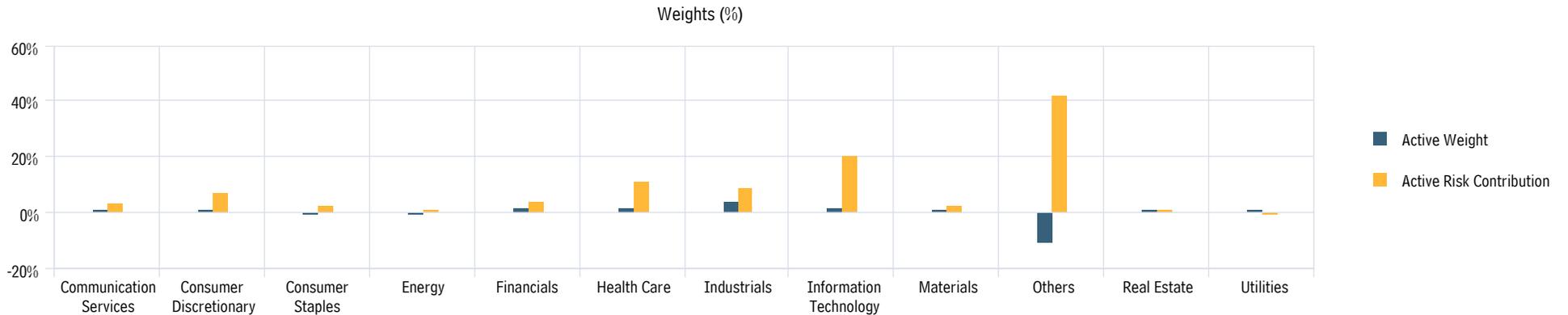
BarraOne Equity Summary

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 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 260
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 2,271,546,187
 ACCEPTED: 260

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	16.59	8.69	100.00	0.09
Communication Services	4.66	3.90	0.76	18.14	0.27	3.14	0.10
Consumer Discretionary	5.12	4.99	0.14	25.55	0.58	6.68	0.14
Consumer Staples	1.80	2.52	-0.72	18.23	0.22	2.55	0.08
Energy	2.28	2.44	-0.16	21.13	0.05	0.62	0.07
Financials	6.53	4.92	1.61	15.00	0.31	3.57	0.10
Health Care	6.52	5.29	1.23	23.21	0.96	11.08	0.12
Industrials	8.31	4.33	3.98	18.01	0.75	8.59	0.12
Information Technology	11.23	9.45	1.79	29.33	1.75	20.11	0.16
Materials	1.49	1.38	0.11	23.29	0.18	2.02	0.13
Others	47.99	58.49	-10.50	15.05	3.65	41.94	0.04
Real Estate	2.11	1.23	0.89	10.22	0.01	0.16	0.07
Utilities	1.94	1.06	0.88	8.27	-0.04	-0.48	0.02



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APPENDICES:

-Basket Clause

-Liquidity Analysis

BASKET CLAUSE ANALYSIS

Trustee Reporting 240
As of 06/30/2023

Basket Limit	35.00%
Basket Consumed	22.97%
Remaining Capacity	12.03%

	Basket-Eligible Assets*				Total
	Non-Basket Assets	Non-Contributing	Contributing	Basket Assets	
FIXED INCOME	22.55%	6.22%	0.00%	5.37%	34.15%
U.S. Fixed	11.28%	5.93%	0.00%	5.02%	22.23%
Cash/Equivalent	6.15%	---	---	---	6.15%
TIPS	2.84%	---	---	---	2.84%
OFI	---	---	---	3.07%	3.07%
High Yield	0.66%	5.86%	0.00%	1.90%	8.42%
Bank Loans	0.00%	---	---	0.00%	0.00%
ETI Investments	0.44%	---	---	0.01%	0.44%
Core/Core Plus	1.20%	0.07%	---	0.03%	1.30%
U.S. Structured	11.28%	0.29%	---	0.36%	11.92%
Credit	2.76%	0.29%	---	0.20%	3.25%
Mortgages	3.30%	---	---	0.15%	3.46%
ST Treasury	1.67%	---	---	---	1.67%
Treasury/Agency	0.83%	---	---	---	0.83%
MT Treasury	2.14%	---	---	---	2.14%
LT Treasury	0.57%	---	---	---	0.57%
EQUITY	28.26%	20.00%	6.43%	11.17%	65.85%
Public Equity	28.24%	10.00%	4.77%	0.03%	43.04%
U.S. Equity	26.66%	1.00%	0.48%	---	28.14%
EAFE	0.29%	5.34%	2.55%	0.00%	8.19%
Emerging Markets	0.16%	3.21%	1.53%	0.03%	4.93%
Global	1.13%	0.44%	0.21%	0.00%	1.79%
Alternative Investments	0.02%	10.00%	1.66%	11.14%	22.81%
Infrastructure	0.02%	2.89%	0.48%	-0.02%	3.37%
Private RE/Core	0.00%	4.53%	0.75%	---	5.28%
Private RE/Non-Core	0.00%	2.58%	0.43%	0.00%	3.01%
Private Equity	0.00%	---	---	11.15%	11.16%
TOTAL ASSETS	50.81%	26.21%	6.43%	16.54%	100.00%
	Non-Basket:	77.03%	Basket:	22.97%	

This analysis shows basket consumption by investment mandate on a security look-through basis.

* Basket Eligible Assets are subject to the following thresholds - above which investment consumes basket capacity: 10% aggregate portfolio weight for investments in non-U.S. listed equities; 10% aggregate portfolio weight for real assets; and 10% aggregate portfolio weight for investments in high yield bonds and foreign debt issues that are registered with the SEC. To the extent that the value of investments in a particular category exceeds a threshold, the excess consumes basket capacity.

In the above table, the investment of cash held as collateral under the system's securities lending program, is included as a Non-Basket Asset in the Cash/Equivalent line.



AUM as of June 30, 2023

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$3,890	\$3,890	\$3,890	\$3,890
U.S.	2,540	2,540	2,540	2,540
EAFE Equity	684	684	684	684
Emerging Markets	505	505	505	505
Global Equity	161	161	161	161
PUBLIC FIXED INCOME	\$2,271	\$2,247	\$2,257	\$2,257
Short Term Securities	48	48	48	48
U.S. Government	470	470	470	470
Mortgages				
Core Mortgages	291	291	291	291
ETI	40	16	26	26
Credit - Investment Grade	407	407	407	407
Corporate - High Yield	759	759	759	759
Corporate - Bank Loans	0	0	0	0
UST - Inflation Protected	256	256	256	256
ALTERNATIVE ASSETS	\$2,337	\$206	\$274	\$274
Private Equity	1,008	0	0	0
Private Real Estate	747	0	0	0
Infrastructure	307	0	0	0
Opportunistic Fixed Income	274	206	274	274
Total Assets	\$8,498	\$6,343	\$6,421	\$6,421
Total Illiquid \$		\$2,155	\$2,077	\$2,077
Total Illiquid %		25.4%	24.4%	24.4%
Unfunded OFI Commitments	\$193			
Unfunded INF Commitments	\$355			
Unfunded PE Commitments	\$730			
Unfunded RE Commitments	\$315			
Total commitments \$	\$1,593			
Total commitments %	18.7%			



BERS Liquidity Profile - Static Analysis

AUM as of June 30, 2023

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$2,155	\$2,077	\$2,077
Total Illiquid %	38.0%	36.7%	36.7%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
Total Assets	\$8,498	\$6,343	\$6,421	\$6,421

Private Equity, Real Estate and Infrastructure Fixed Income Stress Case

Unfunded OFI Commitments		\$39	\$77
Unfunded INF Commitments		\$71	\$142
Unfunded PE Commitments Drawn		\$146	\$292
Unfunded RE Commitments Drawn		\$63	\$126
Total commitments \$		\$319	\$637
Total commitments %		3.7%	7.5%

Total Illiquid \$	\$2,395	\$2,714
Total Illiquid %	28.2%	31.9%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

See Assumptions Page for Full Details

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$2,155	\$2,395	\$2,714
Total Illiquid %	38.0%	42.3%	47.9%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids



Additional Assumptions

Alternative Assets Liquidation Estimates: Private Equity, Private Real Estate, and Infrastructure: assumes no liquidations in 2-year horizon; Opportunistic Fixed Income: assumes 75% immediate availability and 100% availability within one year.

Illiquid Ratio: Illiquid investment value for each of the three time horizons as a percentage of current AUM. The ratio is calculated under three scenarios: 1) Unadjusted estimated illiquid value to current total assets. 2) Unadjusted estimated illiquid values to current total assets after a 33% decline. 3) Estimated illiquid value after Fixed Income Stress Case to current total assets after a 33% decline.

Unfunded Commitments: Uses custodian value at month end.

Denominator Effect: Measures Illiquid Ratio for each time horizon after an assumed 33% decline in portfolio value.

Fixed Income Stress Case: Measures impact of new commitments to illiquid asset classes assuming no capital calls and a level 5-year pacing schedule.

